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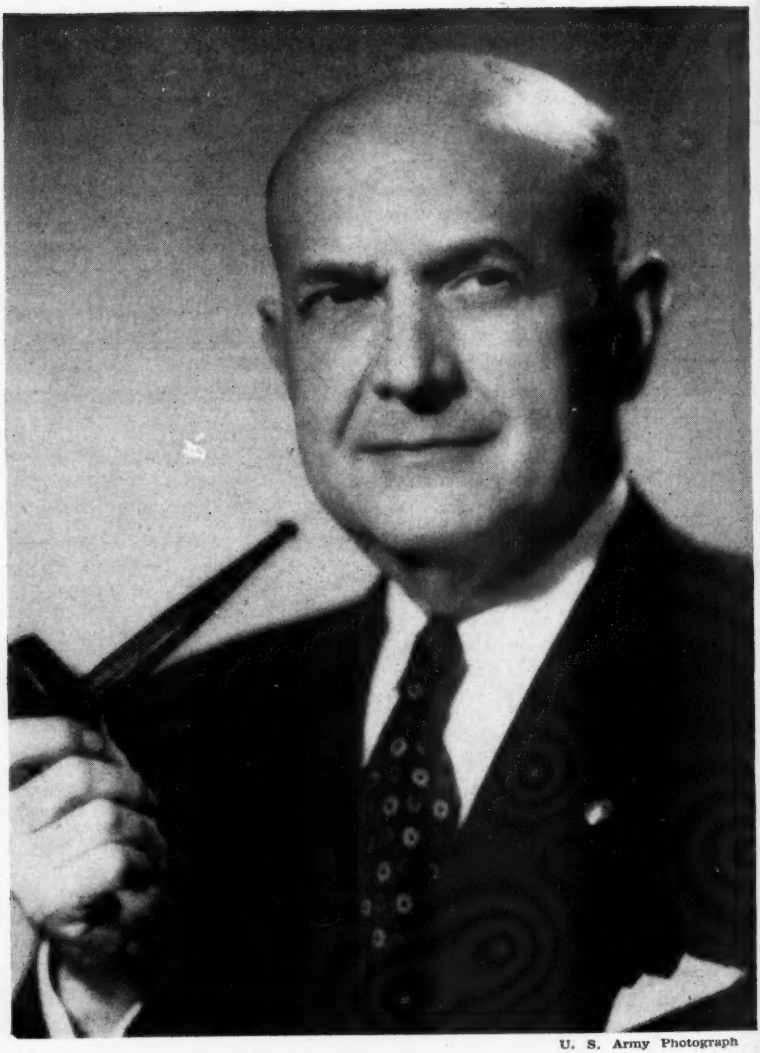

U. S. Army Photograph

THE HONORABLE LOUIS JOHNSON

SECRETARY OF DEFENSE

MILITARY ASSISTANCE -- FOR MUTUAL SECURITY

By

THE HONORABLE LOUIS JOHNSON

Secretary of Defense

OUR security depends, first, on our own strength and, second, on the strength of our allies. We can no longer isolate ourselves from the rest of the world, or rely on our own arms alone. The Military Assistance Program is the only way in which we can start to make our allies strong enough, so that they can make a material contribution to our security as well as to their own.

To the two great measures of our dynamic foreign policy —the Marshall Plan and the North Atlantic Pact—we must now add the essential military aid to meet the grave deficiencies in the equipment with which they are attempting to guard the boundaries of the North Atlantic Community.

The realities of today's world, beset by the impending danger of aggression, now require that the American people, through their Congress, understand and consciously entrust the President with authority commensurate with his increasingly heavy responsibilities for the security of our Nation. The changing tactics of the cold war, the varying pressures that are still being put on nations in all parts of the world, and, most important, the speed of modern war—all demand an equal flexibility in the rapid allocation of our aid and strength. In military matters, more certainly than in any other, rigid limitations which prevent prompt and decisive action can lead to disaster.

The three fundamentals of military preparedness are: *manpower, materials*—and *suitable positions* from which to employ them in the event of attack. The Western European members of the North Atlantic Pact generally have substantial manpower

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From a statement by The Honorable Louis Johnson, Secretary of Defense, before the House Foreign Affairs Committee.

resources. They also have positions of self-evident strategic importance to the defense of the North Atlantic Community, including the United States. However, as a result of World War II, they lack the equipment with which their manpower can defend those positions.

The military vacuum in Western Europe constitutes an obvious and dangerous temptation to a potential aggressor hungry for Europe's growing productive capacity. As a result of Europe's increasing production, some of the military equipment required by our partners can be manufactured by them during the next few years. Consequently, since the European economies can, and ultimately must, fulfill the majority of the equipment needs of the Western European forces, we should continue to give first priority to the European Recovery Plan. However, to assure some increase now in the strength of our lines of collective defense in Europe we must, in the meantime, supply our friends with some of their immediate deficiencies in essential equipment.

Achievement of adequate European military production, as a by-product of European economic recovery, is obviously a long-term proposition. We cannot afford to wait several years for the restoration of full European production. If we should wait, we would be running the risk of again doing "too little, too late." The needs of the democracies of Western Europe are immediate needs which must be met by immediate action—now. This Program accordingly has struck a balance between the furnishing of finished military equipment, on the one hand, and the furnishing of materials and machinery with which certain factories of Western Europe can turn out, over the next few years, substantially more military equipment than these nations otherwise would be able to do.

In contributing limited quantities of raw materials and machine tools to our partners abroad we will receive values in security multiplied by the amount of energy and resources which they will put in . . . We will have started our fellow signatories on the road to military self-sufficiency, the ultimate goal of the Program.

The sending of equipment from our excess stocks and the temporary withdrawal of additional equipment from our reserve stocks, as proposed under the Program, will not appreciably weaken our own Armed Forces. This is because we plan to replace the equipment which is drawn from our war reserves. The effects of the Program upon the equipment reserves of the

ARMY INFORMATION DIGEST Map

Military Establishment have been given the most searching analysis by our ablest military planners. They have planned the Program so that any temporary impact on our own Armed Forces will be more than outweighed by the resultant strengthening of our allies.

The Program, by its very nature, is self-limiting. First, we are providing equipment only for forces which are in being or planned for under existing budgets. Furthermore, we will provide mainly capital items—that is, durable equipment which will not have to be currently replaced—rather than expendable or consumable items for which there would be a recurrent need. Of greater importance is the fact that the recovery of Western Europe will itself increase European productive capacity, and thereby decrease the need for our aid. On the other hand, the duration and extent of the Western European military needs in the future will necessarily be affected by the future international situation.

Under this Program, no United States troops will be sent abroad to employ the equipment we will provide. This Military Assistance Program is solely an equipment and a technical and training assistance program. The only United States personnel involved will be a strictly limited number of technical and training specialists to assist and advise the participating countries.

The formal requests for assistance, submitted to the United States in April by the Western European nations, were supplemented by informal but quite detailed lists of their deficiencies in the equipment for their military forces planned for the Fiscal Year 1950. These lists include highly classified information which we hold in trust. They indicate the size and composition of the forces of these nations, the extent to which they are now, or can be, equipped from internal resources, and finally the net deficit of equipment for which the United States aid is needed.

The size of the proposed Program has been held to a minimum in the process of its development . . . Our application of military criteria, in the light of the defense planning for the areas concerned, has reduced the amount of equipment to be provided to the barest minimum essential to the commencement of a realistic program.

The Defense Establishment will have the responsibility of supplying the military items of aid which are included within the Program. Supply of this equipment will be carried out

by the normal supply and procurement machinery of the Army, Navy and Air Force. The equipment will come from three sources: excess stocks, war reserves and new procurement.

The Defense Establishment now has some excess equipment on hand which, under our present mobilization plans, can be released without replacement. Because there is only a relatively small amount of excess equipment, only a minor portion of the Program can be obtained from our excess stocks. This equipment, however, is as modern as any now available in quantity anywhere in the world.

A much larger portion of the equipment will come from our war reserve stocks, and therefore must be replaced. However, the overall security interests of the United States will be better served by making this equipment available now to the participating nations, where it is immediately needed, rather than by our retaining it in reserve on this side of the Atlantic.

Slightly more than half of the equipment included in the Program will have to come from new procurement, since we cannot reduce our own reserve stocks below certain minimum levels which we consider essential to the security of the United States.

The dollar size of the Program, so far as it includes end-use equipment, is based primarily upon the amounts which will be required to reimburse the Defense Establishment for the equipment which it will supply from its war reserves and from new procurement. In the case of materiel which is excess to present mobilization requirements of our forces, the Defense Establishment will be reimbursed only for the actual costs of its rehabilitation, handling and shipping. In the case of war reserve materiel which is not excess to our present mobilization requirements, we will be reimbursed out of Program funds in amounts not to exceed the replacement costs of this materiel. Where equipment has to be obtained from new procurement, the Defense Establishment will use its procurement agencies to buy the equipment. It will be reimbursed in the amount of its actual procurement costs.

The requirements of each participating nation have been exhaustively examined—in the light of our own planning, the capabilities of each nation to help itself, and our ability to furnish the equipment which it needs. No items are included in the Program which are not absolutely essential.

THE STRATEGY OF *MAP*

By

GENERAL OMAR N. BRADLEY

IN TWO years, a foreign policy for this Nation has evolved which normally would take a quarter of a century. Our participation in a collective security pact with eleven other friendly nations has been given the stamp of approval by our people.

In order further to speed up the time when friendly nations will be able to furnish reasonable security for themselves—and for us at the same moment—it is now proposed that we furnish some assistance to them in the form of military weapons.

In speaking for the Joint Chiefs of Staff, I can assure you that this program, as a logical sequel to the European Recovery Program and the North Atlantic Pact, will materially improve the military capabilities of our friends.

America's pre-war soldiers knew, perhaps better than any others, the disillusionment of working with limited materials, and rudely fashioned, wooden substitutes for authentic weapons. Our soldiers sense the trepidation the European soldier must feel when he is on the front lines of a cold war without the means to defend himself. Our sympathy for the soldiers, sailors, and airmen who fought side by side with us in two World Wars would urge us to aid them again today. But more realistic considerations—the strategy of deterring a potential aggressor, for our own protection—is the backbone of the Joint Chiefs' endorsement of this arms aid. The Joint Chiefs of Staff, and each of the services, have given the most serious consideration to every detail of this program, visualizing it as an opportunity to gain, at a minimum expense, additional measures for our own security.

To confirm, for the American citizen, the critical examination the Joint Chiefs of Staff have given this program, I would like to outline briefly the strategy in which military assistance

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From a statement by the Chief of Staff of the Army before the House Foreign Affairs Committee. Since this statement was made, General Bradley has been appointed Chairman, Joint Chiefs of Staff.

to these nations plays an important part for us. A sound strategic concept is built on considerations of *geographical position; industrial capacity; populations, and the will of these peoples;* all coupled with their *military capabilities.*

The bulk of this aid will go to our co-signers of the Atlantic Pact, and to Greece and Turkey, whom we already assist. Our friends in Western Europe live within the boundaries of our own defensive frontiers. Their geographical locations occupy the very lands we helped to liberate, and which we must not abandon to any further aggression.

Reports have indicated that the European Recovery Plan has already started the wheels of industrial recovery. This Military Assistance Program may even speed up the recovery process, and further develop their industrial capacities for self-help.

The European nations of the Atlantic Pact total more than 150 million people. Their soldiers, when given guns, can man the hard core of any Western European ground defense.

Other reports encourage our belief that their economic recovery and the ratification of the Atlantic Pact have strengthened the will of these peoples to resist Communist aggression. Military aid will rebuild the morale of their armed forces, which will be inevitably reflected in their overall national morale. In a broad strategic outline then, this leaves only the military capability—the fundamental ability to defend themselves—left in the balance.

These factors are the foundation of a sound strategy for *collective* defense. But your counselors on security, including the Joint Chiefs of Staff, have also looked searchingly at this program for mutual security with the necessary attitude: What does it do to improve the security of the United States?

In our approach to this arms aid program, the Joint Chiefs of Staff have followed the principle that the man in the best position, and with the capability, should do the job for which he is best suited. Further, our recommendations for this program have been predicated upon this basic principle, and upon the following assumed factors:

First, the United States will be charged with the strategic bombing. We have repeatedly recognized in this country that the first priority of the joint defense is our ability to deliver the atomic bomb.

Second, the United States Navy, and the Western Union naval powers, will conduct essential naval operations, including

keeping the sea lanes clear. Western Union and other nations will maintain their own harbor and coastal defense.

Third, we recognize that the hard core of the ground-power-in-being will come from Europe, aided by other nations as they can mobilize.

Fourth, England, France, and the closer countries will have the bulk of the short-range attack bombardment, and air defense. We, of course, will maintain the tactical air force for our own ground and naval forces, and for United States defense.

Fifth, other nations, depending upon their proximity or remoteness from the possible scene of conflict, will emphasize appropriate specific missions.

The essence of our overall strategy is this: There is a formidable strength, and an obvious economy of effort, resources, and manpower in this collective strategy, when each nation is capable of its own defense, as part of a collective strategic plan. For that reason, the Joint Chiefs of Staff urge the enactment of this legislation now, when it will do the most good for each of these nations as well as for our own security.

We believe that we should not go further than this in a discussion of strategy, even though the details of these strategic plans are even more convincing concerning the effect of this aid program on our own security.

Finally, we all recognize that some of the nations which seek this assistance signed the Atlantic Pact with a hope that we would share our military resources, from our storehouses and our production, with those men who have staked their lives in the common cause so close to the point of possible aggression.

With our allies, strong or weak as they may be, we face a long period of tension. Now that the Atlantic Pact has been formed, we can surely anticipate that any aggressor will alternately press and quell the crisis, hoping to hold the signatory powers in perpetual irresolution. But irresolution has no apology. It is born of fear and selfishness, and of such meanness that all despise it.

Our rise to leadership must be attended with such courage and circumstance as will ever give it first rank in the history of great actions.

AID

WHAT IS A TOUGH SOLDIER ?

By

MAJOR GENERAL JOHN M. DEVINE

THE phrase "tough soldier" has done the Army incalculable harm. It is time someone defined "tough soldier" for the benefit of our young recruits.

A tough soldier in battle is one whose body is hard and well coordinated. His mind is alert to the dangers around him; he is thoroughly grounded in the principles of his arm of the service. He is a man who knows what he is fighting for and believes it worth the effort. Physically, mentally, morally, spiritually—he is prepared to make the supreme sacrifice for the things he believes in.

This is the "tough soldier." Toughness has nothing whatever to do with how much beer he can drink, how many obscene words he knows, how vulgar he can be, in how many ways he can show his lack of respect for himself and for everybody else. Yet, to many of our young soldiers, the word "tough" connotes just those characteristics. That kind of tough soldier does not win battles. He is the kind of "tough" who digs a foxhole so deep that he has to cut steps in the sides in order to climb out. It is he who runs and hides in the bushes when the fighting begins, because he has no standards, no sense of values. He won't fight for anything, because to him there is nothing worth fighting for.

Some of the toughest soldiers I knew in World War II were quiet, gentle fellows; and the outstanding instance of cold courage that came to my attention was the action of two chaplains.

Toughness, gentleness, courage—indeed, all the human qualities that make the soldier—are part of our training program, or should be. For military training recognizes the nature of

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MAJOR GENERAL JOHN M. DEVINE is Commanding General, 1st Cavalry Division. From October 1946 to January 1948, he commanded the Universal Military Training Experimental Unit at Fort Knox.

the man and makes provision for his well-rounded development. The soldier must not only be built up physically and alerted mentally; he must also acquire a sense of moral and spiritual values.

We have had long experience in teaching military subjects and in developing men physically. The records of World War II show that we have been successful, and there are few who would challenge our claim to being experts. In the field of the mind, we have been making, for several years, a far reaching and successful effort to stimulate our soldiers. We have offered them educational opportunities far beyond the scope of technical military training. We have helped them to develop their minds and improve their skills, so that they may become more valuable citizens, as well as better soldiers.

In the third field of training, however—the field of moral and spiritual values—our past efforts have been feeble. Yet this is the most important of the three fields of training. It is the field of human relations. Ignore this aspect of training and we have men who fight only because they are ordered to fight, who are resentful, who are careless of their obligations and prodigal of their companions' lives.

There is no reason why the behavior standards—both moral and ethical—of a group of soldiers should not be as high as, or higher than, those of a comparable group of men anywhere in the world. The average young soldier wants to do the right thing, and he will do it if he knows what it is. He wants to get along in his unit; he wants the good opinion of his associates and of his superiors; he is ambitious and wants to get ahead. What he needs, more often than not, is proper guidance and proper leadership, with a strong hand on the reins.

That guidance and that strong hand must be provided, obviously, by the commander; but in this field of character guidance, the commander has staff officers trained to assist him. Character guidance is not, as many still believe, merely another name for venereal disease control; it is a vital part of military training—training that is concerned with the whole man.

The chaplain's weekly hour is at the heart of the Character Guidance Program. Here is his opportunity to raise the social, moral and spiritual tone of the organization; to teach the really important things of life. But alone, the chaplain can accomplish little. All leaders are also character guidance instructors—by their words and by their example. They must never cease to teach high standards to men who never had

them, and to help others to maintain those standards. The Troop Information Program hour is an important part of character guidance. Here the company commander has an opportunity to impress his own personality upon his men, to make a personal contact with all of them, to answer their questions, to acquaint them with things of military significance in the world immediately around them.

The education program, too, is intimately wrapped up with character guidance. To complete a correspondence course is a real test of character. Any man who participates voluntarily, after a hard day's work, is building character. A major part of the Special Services program likewise is character guidance. To encourage a taste for good music is to build character; or to stimulate an interest in hobbies, so as to give our soldiers resources within themselves for their own entertainment. Whenever we can substitute active recreation for the purely passive, we are building character. Historical tours, trips to places of interest, activities that teach our own or foreign history also help to make the soldier a better and more alert citizen.

If, as part of our sports program, we also teach sportsmanship and fair play, we are building character. If, at the pay table, we convince the average soldier that he will benefit by saving a considerable portion of his pay, we are building character. It we can raise the standards in our barracks to the point where obscenities cease, and a man can leave his wallet on his bunk when he goes to the showers, then we are building character, indeed.

The essential thing is for us to consider military training as a whole, as a program that will develop the well-rounded man. To look upon Troop Information and Education, Special Services, and the Chaplain's Program as mere appendages, which contribute nothing to the development of a soldier—is only to handicap ourselves in the accomplishment of our mission. These items are not superfluous. They are essential parts of an integrated program for training young men, and they must be so regarded.

When this attitude is generally accepted by all our Army, and is understood from the lowest to the highest echelons, the question of character guidance will take care of itself; because it will be only a part of an integrated program for making men out of boys.

Reprints of this article available on request to the Editor.

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NEW HORIZONS IN PERSONNEL POLICY

By

THOMAS R. REID

A new voice has been added to the chorus in The Pentagon, to speak for the people of the Armed Forces. Through the Personnel Policy Board, the viewpoint of the individual human being—military and civilian—is now represented in policy decisions at the highest level.

The Personnel Policy Board operates directly under the Secretary of Defense, on a level with the Joint Chiefs of Staff, the Munitions Board and the Research and Development Board. The view has been accepted that people are as important as military plans; that they occupy a key position on a par with ships, guns and airplanes.

The establishment of the Board, in December 1948, followed months of exploratory planning and discussion. The need was pointed out by the Hoover Commission, the Hook Commission, and the Secretary of Defense himself. They agreed that the individual serviceman—and the civilian employee—is the heart and core of our national defense. Even the most intricate equipment still requires a human being to start it; and failure of the human element can nullify the effectiveness of even the most beautifully planned weapon or machine. Millions of hours of time and millions of dollars in research and engineering pay off, at critical times, only if there has been a successful blending of men and machines.

THOMAS R. REID was Chairman, Personnel Policy Board, Office of the Secretary of Defense, from December 1948 to September 1949. He is succeeded by Hubert E. Howard, Chicago industrialist.

Our thinking has come a long way since the time when we thought of so many "bodies" to fill a unit, in much the same way that we thought of horses, or tents. Now we know that manpower in the mass does not necessarily make an effective fighting force. It takes quality as well. We have learned a great deal about emotional and psychological reactions, and their importance to a well-integrated fighting unit. More and more, we look upon the individual human being as exactly what he is—a complex mechanism of body, and mind, and spirit. We are learning the value of motivation, and are developing ways to mold it, just as we have learned to shape physical and mental capacities through exercise and education.

This new knowledge has kept pace with similar developments in business and industry. The concept of early-day businessmen—that labor was a commodity to be bought and sold in the market place, just as fixtures and machines could be bought and sold—has given way, through the years, to an increasing understanding of the individual. With this trend has come the awakening of an entirely new profession—that of the personnel executive.

The importance of the personnel executive has increased as heads of business and industrial establishments have found that they can no longer handle the problem of people in time spared from other duties. There was a day when the skilled production man was the most likely to climb to a top position. Then the merchandising or sales expert moved into a choice position, to be followed, in recent years, by the public relations executive. But in the years to come, more and more, heads of corporations will be chosen from the human relations executives—the men who know how to handle people.

Slowly but surely, human relations has changed from an art to a science. Haphazard trial and error methods have given way to a scientific approach. New discoveries and techniques have provided clear-cut measuring sticks of individual ability and attitude. Application of these techniques, we have learned, can step up individual productivity and efficiency, just as engineers and scientists have stepped up productivity through their mechanical and scientific discoveries.

In the Armed Forces, personnel policy is the keystone of unification. For unification itself can never be complete without coordinated effort in the area of human relations—at the top. There can be no thinking in terms of joint enterprise and joint achievement if vast differences exist among the services

Personnel Policy Board

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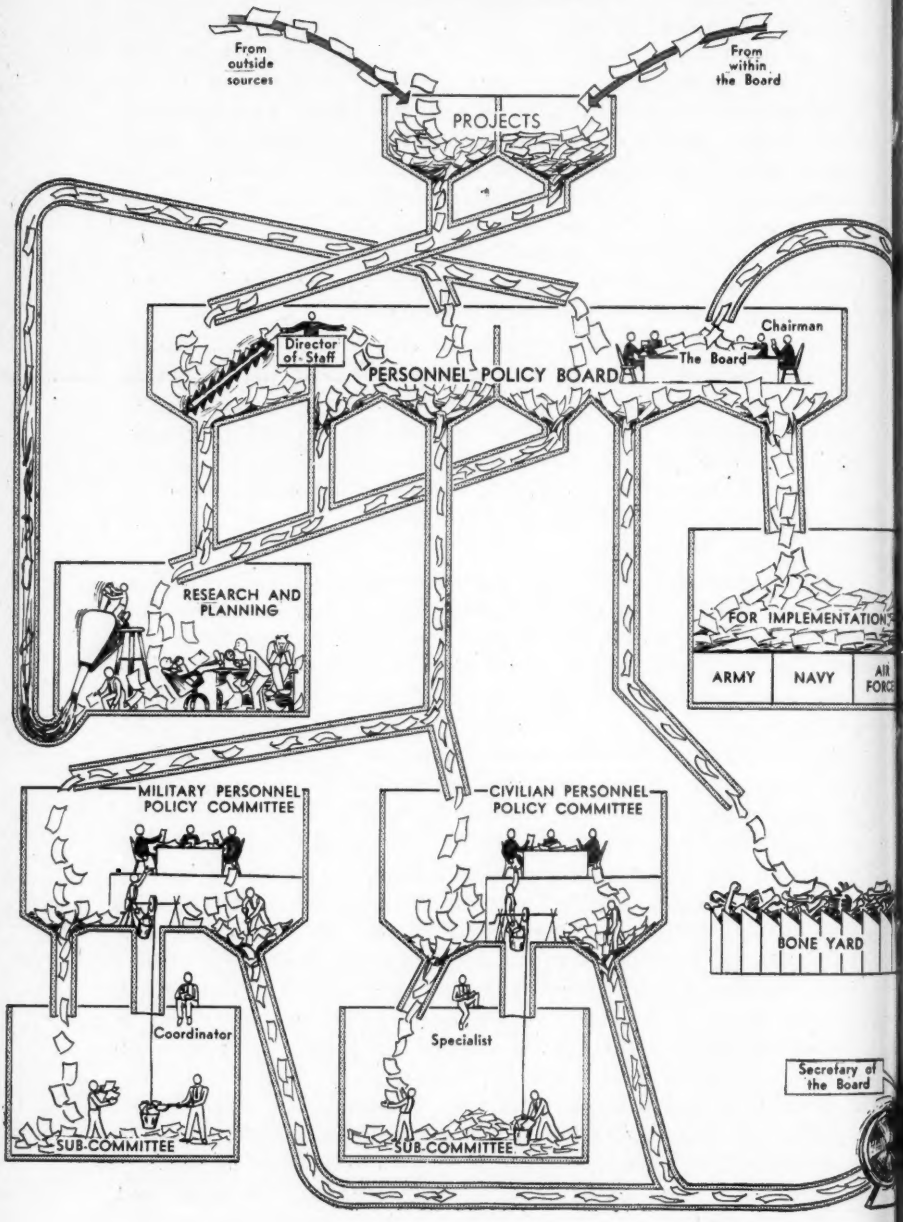


in their concepts of dealing with people. The serviceman, for example, who sees his contemporary in another service, of equal rank and skill, receiving greater benefits of one kind or another, cannot help but reflect upon his own welfare. Generally speaking, there is little reason for such discrepancies, except that they may have grown up with the service, becoming entrenched, with the years, by custom and tradition.

With each service setting its own personnel policy, it was inevitable that the early stages of unification would bring to light certain conflicts, overlapping, and duplication. For lack of an established agency to handle these problems, some found their way to the Office of the Secretary of Defense. Others were sent to the Munitions Board. So many of them came to the attention of the Research and Development Board that the Human Resources Committee of that agency developed into one of its most important units. Personnel matters seemed to intrude upon all agencies of the National Military Establishment.

At the time the Personnel Policy Board was established, the backlog of these unresolved problems had reached sizable proportions. An invaluable service, in helping to keep them in check, was being performed by the Armed Services Personnel Board, an outgrowth of the old Army-Navy Personnel Board. Taking time from their regular duties with the services, the military personnel chiefs comprising this Board met regularly to consider inter-service problems. If there was unanimous agreement on a given subject, the Secretaries of the Departments usually put the agreement into effect. In those instances where agreement could not be reached, however, or in those cases of major policy where a decision by higher authority was needed, ideas often died for want of blessing from the Office of the Secretary of Defense.

The Personnel Policy Board began its work with the mission of: (1) studying personnel policies for both military and civilian personnel throughout the military establishment; (2) developing uniform policies, where desirable; and (3) eliminating unnecessary duplication and overlapping. Under this one authority were placed all interdepartmental boards, committees, and agencies directly concerned with civilian or military personnel policy.

The responsibilities assigned to the Personnel Policy Board were all-inclusive—so much so that it hardly seemed possible that any personnel matter could escape its attention. In fact, an early jurisdictional question still persists—just what isn't

personnel? Again and again, the Board was presented with weighty projects, many of them having overtones of personnel significance, but with basic content which clearly marked them for action by other agencies. The Board was engulfed in an avalanche of paper. Some cases merely represented an accumulation of years of waiting for such a thing as the Personnel Policy Board to come along. Others required coordination only. Gradually, with time and experience, the backlog was reduced.

For a period of some weeks after its inception, the Personnel Policy Board staff, in its entirety, consisted of a Chairman, a Director of Staff, and two secretaries. The staff grew, slowly but steadily, into a hand-picked group of officers and civilians—all imbued with one salient quality: sympathy for the problems of people.

Today, the Personnel Policy Board staff is among the smallest in the Defense Department. Twelve officers and 35 civilians are engaged in establishing and coordinating personnel policy for approximately 1,700,000 military persons, and some 900,000 civilians of the Army, Navy, and Air Force—the world over. Of necessity, staff work by this small force consists mainly of initiating and reviewing functions.

The organization of the Board was set up in a logical pattern, along functional lines. Immediately under the chairman is a Director of Staff, under whom three staff chiefs operate—the Chief of Research and Planning, the Deputy Director for Military Personnel Policy, and the Deputy Director for Civilian Personnel Policy. The Chief of the Research and Planning Group, which consists of officers from the three services and a civilian from the Office of the Secretary of Defense, serves as the principal adviser to the Director of Staff. Each of the Deputy Directors has a small staff, representative of the three services, or of civilians in the Armed Forces. Working through the Deputy Directors are two committees, one concerned with military personnel policies, the other with civilian policies. Made up of the senior personnel officers of the military services and of the Directors of Civilian Personnel in the three services, these two committees and their various subcommittees work fairly independently. All of their decisions are referred to the Personnel Policy Board for final approval. The Deputy Director for Civilian Personnel Policy, a civilian, serves also as chairman of his committee.

The Deputy Director for Military Personnel Policy handles

by far the greater volume of projects, both in number and importance. He is assisted by coordinators who assume responsibility over groups of committees set up by functional areas. A committee coordinator, for example, will arrange for the establishment of inter-service subcommittees on all projects pertaining to recreation, welfare and morale; he will do the staff work for a subcommittee; write its report; and see the report through the Military Personnel Policy Committee, and eventually through the Personnel Policy Board itself.

A new chairman of the Board, Hubert E. Howard, of Chicago, will take office in September. As of 15 August, the Board members were: Dan A. Kimball, Under Secretary of the Navy; Eugene M. Zuckert, Assistant Secretary of the Air Force; and Lieutenant General E. H. Brooks, Director, Personnel and Administration Division, General Staff, United States Army. An Assistant Secretary of the Army is to be assigned to the Personnel Policy Board as soon as possible after new appointments are made. Brigadier General C. T. Lanham was Director of Staff from the time the Board was organized until July 1949, and rendered invaluable service in establishing the Board on a firm operating basis. He was succeeded by Vice Admiral John M. McCrea.

In March 1949, the powers originally delegated to the Board were vested in the Chairman, and the Board was reconstituted as an advisory body. Actually, this caused little change in the Board's working procedure. From the start, Board activities have been conducted on a team-play basis. At the regular weekly meetings, discussions are frank and free, and no punches are pulled. Decisions are arrived at after a full hearing and complete consideration of all points of view. Although the Chairman has the final, deciding voice on all unresolved questions, it has not been necessary to exercise this authority. Once agreement is reached, the Chairman has authority to act, with all the force and authority of the Secretary of Defense, in sending the decision to the Secretaries of the Army, Navy, and Air Force, to be put into effect.

By directive of the Secretary of Defense, the Chairman is responsible for policy matters affecting the Armed Forces Information and Education Division, recently established on the Office of the Secretary of Defense level. The Director of the Armed Forces Information and Education Division consults with the Chairman of the Personnel Policy Board in formulating major policy. Facilities of the Board are available to the

Information and Education Division, and the Board itself may participate actively, as it did in drawing up a new charter for the Armed Forces Information and Education Division.

The Board is the liaison agency, for the Secretary of Defense, with two special Presidential committees—the President's Committee on Equality of Treatment and Opportunity in the Armed Forces, headed by Mr. Charles Fahy; and the President's Committee on Religion and Welfare in the Armed Forces, of which Mr. Frank Weil is chairman. The Fahy Committee has been studying racial matters in the Armed Forces, with the active assistance and coordination of the Personnel Policy Board and staff. Action initiated by the Personnel Policy Board has led to the establishment of a Defense Department policy in this area, with the Air Force and the Navy plans already accepted by the Secretary of Defense.

Meanwhile, the Board is coordinating its activities with the President's Committee on Religion and Welfare in the Armed Forces (the Weil Committee). A Housing Commission has been formed to investigate Armed Forces housing problems, with a view to making recommendations to the Bureau of the Budget and to the Congress for correction of this most pressing problem affecting military morale. Currently, the same Committee, in coordination with the Chairman and staff of the Personnel Policy Board, is studying the Armed Forces Information and Education program as it works in the field.

The activities of the Board and its accomplishments to date range all the way from solution of far reaching controversial issues on personnel policy, to such details as standardization of personnel records and forms—even to determining the order of precedence in ceremonies. Between these extremes lies a substantial record of accomplishment.

Human relations once again has earned its rightful place in organization structure and is given the prominence its importance deserves. Not only will men be considered as individuals; their skills will be developed, and their abilities will be given a chance for full play. Only in such an atmosphere can men develop constructive attitudes toward their jobs and toward the job of the team. It is only thus that all our energies can be focused on the supreme task—the security of the United States.

AID

A DAY WITH THE CHIEF OF STAFF

By

CAPTAIN EDGAR M. RAMSEY, JR.

WHEN an officer gets the one chance in fifty-four thousand to become the Chief of Staff of the United States Army, he is no longer a private individual but immediately becomes the public property of the United States. He is provided with a spacious set of quarters, including a state dining room; and he is given the use of a limousine, a chauffeur, and a sumptuous suite of offices —all the trappings of a Very Important Person. But it takes more than the impedimenta of rank to be Chief of Staff. It takes endurance, unlimited perseverance, and an unfailing sense of humor. Otherwise, the job wears out the man in a short time.

Since this article was prepared, General Bradley has been appointed first Chairman of the Joint Chiefs of Staff—a post created by the National Security Act Amendments of 1949.

(See page 59.)

That General Omar N. Bradley has the requisite personal qualities and the professional acumen goes without saying. But as the military head of one of the biggest business enterprises in the United States today—an Army of 658,000 officers and enlisted men and women, on duty around the globe—he also must possess all the keen business judgment of a corporation executive. There is this difference, however. An executive of a large corporation, besides making frequent inspection trips to factories and sales offices throughout the country, may normally expect to play a bit of golf now and then—even take a winter vacation in Florida. This, unfortunately, is not true of the top executive of the United States

CAPTAIN EDGAR M. RAMSEY, JR., FA, is aide-de-camp to the Chief of Staff, United States Army.

Army. His days are long and filled with appointments. Much study must be done at home, in comparative quiet, away from the incessant summons of the telephone.

General Bradley arises each morning at 0600 and, after a light breakfast, starts his day's work at home. His study, on the second floor of Quarters One at Fort Myer, is small. The walls are lined with war maps and mementoes of his European campaigns. Before him, on a small standard-issue Army desk, piled with reports and memoranda, stands a picture of his family. Working here, General Bradley has a chance to concentrate, to study the many papers which he has brought home from The Pentagon the previous evening, and over which he has worked late.

Promptly at 0800, he walks into his office—on the third floor of The Pentagon, just over the Mall entrance—to a desk used by every Chief of Staff since General Sherman's tenure during Grant's administration. The Assistant Secretary to the General Staff follows, bringing papers and dispatches which have come in during the night and which require approval or disapproval by the Chief. These may be anything from a report from General MacArthur on military developments in Japan to a group of photographs from General Huebner, showing badly uniformed recruits arriving in the United States Zone of Germany.

At 0830, the Chief goes next door, to the Office of the Secretary of the Army. There he discusses with the Secretary the problems of the day. This meeting—a daily affair—may take anywhere from a half-hour to two hours. After the General returns from this conference, the stream of callers begins.

A typical day brings the following: At 0900 Brigadier General James E. Moore, Secretary of the General Staff, is on hand to discuss matters which have arisen. Normally most General Staff matters are handled either by the Vice Chief of Staff, General J. Lawton Collins,* or by one of the two deputies, Lieutenant General Albert C. Wedemeyer, Deputy for Plans and Combat Operations, or Lieutenant General Wade H. Haislip, Deputy for Administration. But frequently, when one of them wants to get General Bradley's views on a pending decision, General Moore acts as liaison.

Next, Colonel Beukema, professor and head of the Department of Social Sciences at the United States Military Academy,

* General J. Lawton Collins was later appointed Chief of Staff, United States Army.

U. S. Army Photograph

General Collins and General Bradley confer in the Chief of Staff's Pentagon office.

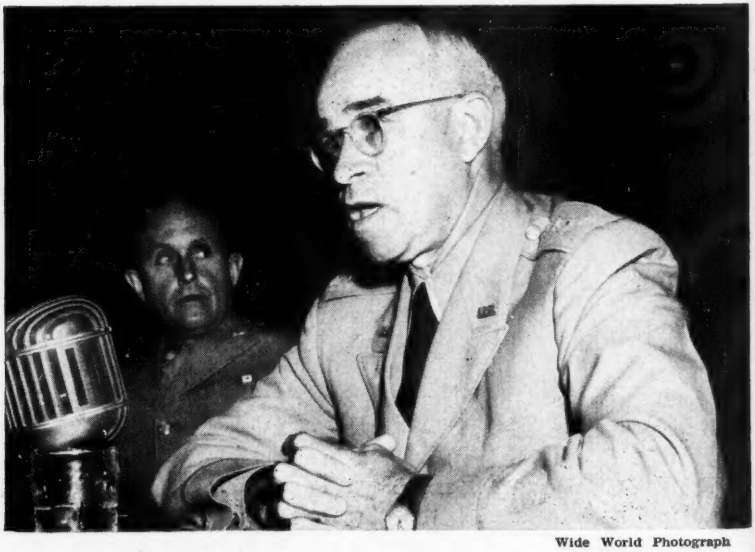
has an appointment to discuss important changes in the curriculum at West Point. The conference is interrupted by a Congressman, telephoning on behalf of a constituent who wants to return to active duty. The Chief refers him to the proper staff section. The Chief next calls General Haislip on policy matters affecting the procurement of medical and dental officers.

At 0930, the Chief of Staff of the Chilean Army, General Ramon Canas, is presented with the Legion of Merit in the Chief's office. General Canas, in turn, presents the Chief with a small bronze bust of the Chilean national hero, General O'Higgins. Various diplomatic and military attaches attend; and photographers and newsmen record the event. Next, twenty-five members of the 82d Airborne Division, winners of the distinguished soldier-of-the-month citation, are introduced, talk with the Chief for a few minutes, and have their pictures taken with him. Meanwhile, there is a telephone call from a Washington newspaper publisher, inviting the Chief to play golf. Because of the pressure of work, the General must decline.

At 1000, the Chief leaves for a meeting of the Joint Chiefs of Staff, at which two important proposals are to be discussed with General of the Army Dwight D. Eisenhower. Returning to his office in company with General Eisenhower, the Chief continues his discussion of JCS matters.

Luncheon is taken with the Secretary of Defense and with other members of the War Council. The week has been so crowded with activity that the regular weekly meeting of the War Council has been deferred. Certain high priority matters which require immediate decision, however, are settled at the luncheon meeting. Back in his office at 1330, the Chief gets a hair-cut from Benito, the barber, while he works on his statement on the North Atlantic Pact, for delivery before the Senate Foreign Relations Committee. After this, a succession of General Staff members arrives, to "sell papers." In The Pentagon, "selling papers" is a term commonly used to describe the clearance of documents, prepared by other staff members, that require concurrence of the Chief.

Major General R. W. Bliss, The Surgeon General, arrives at 1430 to discuss plans for meeting the shortage of medical and dental officers. Next comes a telephone call from General Hoyt S. Vandenberg, Chief of Staff, United States Air Force. The generals discuss the Chief's recent testimony before the House Armed Services Committee, in which he spoke for all the armed services on the military pay bill. Immediately afterward, Major General Charles W. Ryder, Special Assistant to the Chief of Staff of the Army for Civilian Com-



Wide World Photograph

Testifying before the Senate Foreign Relations Committee.

ponents, outlines plans for an inspection of National Guard and Reserve divisions in summer training, the trip to be made by the Chief late in the summer. The next caller is General W. H. Arnold, Acting Army Comptroller. Together, they analyze various items in the Army budget for Fiscal Year 1950. The Chief must be thoroughly conversant with the fine points when he appears before the Senate Appropriations Committee.

At 1600, the Chief takes time out for a refreshing cold drink, a piece of cake and birthday greetings to one of his Wac secretaries, Warrant Officer (Junior Grade) Mary Harrison. A few minutes later, the Mayor of Boston is on the telephone with an invitation to speak in his city. The Chief has to decline.

At 1615, the Chief receives a delegation of German labor leaders, touring the United States under the auspices of Military Government. Most of them express amazement that an ordinary civilian may meet and converse with the top ranking military leader of the country. For the delegates, recalling arrangements under the Nazi regime, this is indeed a new experience in democratic ways. Fifteen minutes later, Eric Sevareid, Washington commentator, interviews the Chief on the role of the military establishment in its relationship to the foreign policy of the United States. He asks the Chief to expand the ideas contained in his speech before the Jewish War Veterans' annual meeting in New York—a speech in which General Bradley, at the request of the Secretary of State, had made the first major public policy statement for the United States Government on the North Atlantic Pact. General Bradley is interrupted by a telephone call from the Capitol. Could Lieutenant General Walter Bedell Smith be brought along the following day when the Chief testifies before the Senate Appropriations Committee? General Smith, at the time, is in Denver, speaking before the Governors' Conference. The wires begin to hum, and General Smith makes arrangements to return. A call from Capitol Hill cannot be ignored.

At 1700, all the secretaries except one leave for the day, and General Bradley begins dictating his correspondence. The Chief—or Boss as he is affectionately called by his staff—receives an average of ninety to one hundred pieces of mail daily, some of which are routed immediately to the proper agencies. An average of five a day will be invitations to speak at a convention or state fair, or to address a current events study group, or to officiate at some commemorative ceremony.

Needless to say, the great majority of these invitations must be declined. The Chief believes firmly in running the Army first, fulfilling only such other engagements as his extra time will permit. He is never too busy or too preoccupied, however, to stop and speak to each member of his office staff, to sign up to twenty-five personal letters each day, or to chat with the military police at the Mall entrance when he enters or leaves The Pentagon.

At 1740, the Chief calls Mrs. Bradley, asking her to go alone to a reception honoring a retiring officer; and he will join her later if he can. At 1800, Tracy Voorhees, Assistant Secretary of the Army,* arrives to discuss policy matters relating to the Occupation Forces in the United States Zone of Germany. This conference, scheduled for twenty minutes, actually lasts until 1855. Finally, at 1900, the Chief leaves the office for home, too late to attend the reception honoring an old friend. Dinner at eight is formal, an official function honoring General George Marie Revers, Chief of Staff of the French Army, and the French Ambassador.

Before dressing for dinner, the Chief takes ten minutes to listen to the baseball scores. Mrs. Bradley returns and, together, they talk over last-minute plans and seating arrangements with the Aide and the butler. Protocol must be followed explicitly in seating each of the twenty-two guests.

Time must be taken for a moment of relaxation, before the dinner guests begin arriving. Promptly, the diplomatic limousines pull up at Quarters One and discharge their passengers. By eight-thirty the guests have arrived and shortly they all go in to dinner.

At 2230, the guests begin departing; and by 2300 all have gone. After a chat with Mrs. Bradley, the Chief puts on his favorite sweater—old, well-worn, but comfortable—and returns to his study for more work on papers that he has brought from the office. This work continues until after midnight, when the General feels that he must let up for the day.

During the preceding eighteen hours, there has been no opportunity to spend any time on personal affairs, and very little time for his family.

And this schedule goes on, day after day, with work on Saturday and sometimes on Sunday. Tremendous stamina is required to stand up under such a work load. The Chief,

* Mr. Voorhees recently was appointed Under Secretary of the Army.

U. S. Army Photograph

The outstanding graduate of the first class at the WAC Officer Candidate School, Camp Lee, receives congratulations from the Chief of Staff. Left to right: Colonel Mary A. Hallaren, Director, WAC; Mrs. Bradley; The Honorable Edith Nourse Rogers, Congresswoman from Massachusetts; and Lieutenant A. G. O'Sullivan, who headed her class at Camp Lee.

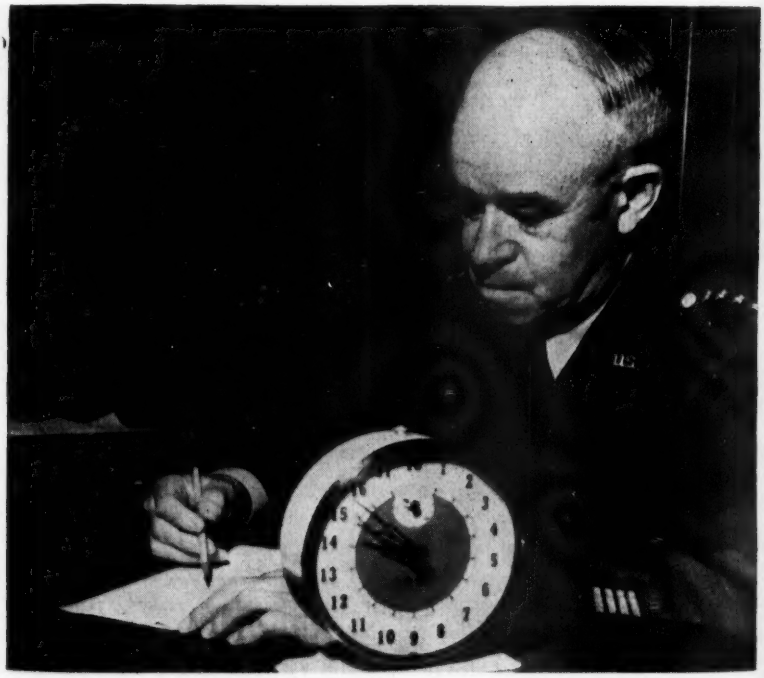
however, meets each problem squarely. He possesses that rare faculty of complete concentration upon the problem being discussed at the moment. In this way he disposes of many questions in shorter time than would a less disciplined person. The variety of the tasks, he finds, helps somewhat to lessen the burden.

At rare intervals, there will be an afternoon in which there is not a single scheduled appointment. Then his staff tries to get the Chief out of the office and onto the golf course. Sometimes these moments of relaxation cause no little consternation among players at the Army-Navy Country Club. A tall man in a cloth fishing hat and sport shirt will walk out to the first tee and announce to the waiting players, "I'm Omar Bradley. Anybody looking for a foursome?"

During the long day, the Chief's wife—his greatest fan—has been busy with her share of the responsibility. It may be a meeting of the Army Emergency Relief Committee, of which she is a board member; or visiting the patients in Walter Reed General Hospital. It may be an afternoon tea at which she, in a quasi-official capacity, represents the military in honoring the wife of some visiting foreign official; or it may be one of the many social functions which the Bradleys, as part of the official family of Washington, are re-

quired to attend. The honors bestowed on the Chief of Staff and his lady provide a proper and fitting climax to a distinguished career in the military service; but, by the same token, the position entails hard work and long hours. It leaves little time for the simple things the Bradleys like doing so much—slipping into the post movies to see a favorite star, going fishing, or playing with their grandchildren, who come for frequent visits.

When his tour of duty is completed and he winds up his official duties in The Pentagon, General and Mrs. Bradley dream of a little "servant-proof" house, away from the official limelight, far from the capital of the Nation to which he has given so many years of devoted and distinguished service.



U. S. Army Photograph

At the pace at which General Bradley works, his staff believed he should have an 18-hour clock—and designed this one especially for him.

PSYCHOLOGICAL WARFARE COMES OF AGE

By

COLONEL DONALD F. HALL

SINCE the times when Cro-Magnon man etched his crude figures on the cave walls of Europe, mankind has been exploiting the mass thought of his fellows through the medium of propaganda. But it took thousands of years to awaken military leaders to the potency of planned propaganda as an operational weapon. That realization was crystallized in the ideological conflict of two World Wars. These wars brought to life an ancient principle of military science: The body may be broken and captured without breaking the spirit; but the warrior who captures the spirit of his opponent can simply walk in and take over.

The application of this principle, for want of a more specific term, is called Psychological Warfare.

Psychological Warfare is not a substitute for battle; but it is an extremely effective weapon which can be employed to minimize the expenditure of human life and the destruction of property. It is a supplementary means of combat which can facilitate and exploit successes in the air, on the sea, and on the battlefield.

The constant detonations of today's propaganda barrage from abroad have stimulated a wholesome respect for psychological warfare as a weapon, be the struggle lethal or otherwise. Placement of the military functions of this weapon in our Army organization, planning for its use in conjunction with other weapons of war, developing its techniques, and training in its strategic and tactical use—offer a challenge to the architects of our new defense structure.

Although psychological warfare as we know it dates back to General Pershing in France, it came into its own during the

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latter part of World War II. Its stock took a sharp rise when many hundreds of German and Italian soldiers came into our lines carrying the surrender leafllets which had been disseminated by the Psychological Warfare Branch of Allied Force Headquarters. From that point on, the curve of our combat propaganda was consistently upward.

The little group of PWB officers and civilians who felt their way through the mistakes of the African and Italian campaigns little knew that they were establishing a pattern for psychological warfare and technique. The basic plan which they evolved became the blueprint for the huge psychological warfare organization that went into Normandy. Under vastly different conditions, the psychological warriors in the Pacific evolved techniques and operational programs that effected startlingly successful results and added tremendously to the crystallization of our psychological warfare formula. The principles developed by these pioneers are still valid, and must be considered in our planning for the future.

In no other field of warfare is our Army more dependent upon the civilian components. The Regular Army can count on one hand its experienced combat propaganda specialists. The civilians and temporary officers who needled psychological warfare in 1945 took off their uniforms on V-Day and flocked back to their radio stations, newspapers, and advertising agencies. They took with them too large a part of our small stock of psychological warfare know-how. Only a handful of veteran enthusiasts remained.

Postwar activities in this field, as in others, were stalemated by apathy and attrition. Army officers who had seen enemy morale slump under psychological attacks by combat newspapers, surrender leaflets and tank-mounted loudspeakers realized the importance of conserving our newly devised war art; but many still clung to the tradition that psychological warfare is a plaything of super-academicians.

Giving practical impetus to the psychological warfare activity carried on in the War Department, an aggressive program was launched at Army Ground Forces headquarters. There, in March 1946, a psychological warfare desk was established by General Jacob L. Devers, to analyze techniques, formulate doctrines and preserve the essential skills acquired in the cut-and-try experiences of the war. A course in psychological warfare was instituted in the Intelligence School at Fort Riley. Emergency textbooks were prepared. A circuit-riding

team of instructors conducted courses at Forts Benning, Sill and Knox, in an effort to indoctrinate young Regulars in the potentialities of the new weapon. The two or three available specialists from the Reserve worked overtime in lecturing and conducting conferences at other service schools. An experimental propaganda unit of four officers and twenty enlisted men was activated at Fort Riley as a part of the Aggressor training force. Slowly but surely, psychological warfare emerged from its "baloney barrage" aura and took on a new mantle of serious respectability.

The future of psychological warfare in our Army is encouraging. Most service schools are giving time to the subject. Students are writing theses on its various aspects. Special research and development projects are under way in high places. The Tactical Information Detachment at Fort Riley has functioned admirably in recent field exercises. After two years, a psychological warfare field manual is nearly ready for publication. In its preparation, there has been, of course, disagreement on doctrinal structure and organizational planning between the super-academic and the down-in-the-muck-of-the-line proponents of propaganda; but these differences have been reconciled.

Another valuable instructional aid will become available this fall—a series of correspondence lessons in psychological warfare, prepared at The Ground General School. Seven subcourses will be available: Psychological Warfare, General; Organization for Psychological Warfare; Tactical Propaganda; Intelligence for Psychological Warfare; Consolidation Psychological Warfare; Strategic Psychological Warfare; and Propaganda Analysis. This material will be of particular value to Reserve personnel, who are already feeling the acute shortage of authoritative texts. In order to meet the need for ROTC texts, a comprehensive section on psychological warfare was published in 1948, under Army Field Forces supervision, as a part of the ROTC series of manuals.

In January 1947, the Director of Plans and Operations, General Staff, was assigned responsibility for general supervision of Army psychological warfare activities. Other General Staff agencies and the Office, Chief, Army Field Forces are leaving no stone unturned to devise strategic and tactical propaganda organizations for assignment to appropriate Army and Theater commands. The structure and functions of these organizations is highly classified information.

A program to commission civilian experts in the Reserve has been particularly successful. In one pioneer psychological warfare Reserve unit, in New York City, some fifty-eight Reserve officers with wartime experience in the propaganda and publicity fields are training intensively and enthusiastically in psychological warfare planning and technique. Other units of the Reserve, set up under the obsolescent T/O 30-47, are persistently engaged in technical training in radio, so essential to effective strategic propaganda operations.

When the call went out, qualified civilians—from the press, the colleges, the radio stations and advertising agencies—responded promptly, enthusiastically and in numbers. They wanted wartime psychological warfare assignments, either in or out of uniform. Most of them prefer military status in the Reserve to the role of highly paid civilian experts.

In committee studies and on individual assignments, these Reservists are combing past history, analyzing successes and failures of wartime operations as a guide to future planning. On the basis of such studies, plans are formulated for applying psychwar principles in theoretical situations. As a culminating effort, a group's professional resources may be pooled in a special area study. In this case, all available information on a hypothetical enemy—his geopolitics, social organization, population groupings, language and communications media—is assembled, dissected, and scrutinized. A plan of psychological warfare is then drawn up, combining the expediency of combat experience with tested scientific principles. All the basic appeals and avenues of approach—radio, newspaper, leaflet, and word of mouth—are exploited, with each specialist contributing his ingenuity in the main effort—the destruction of the enemy's will to resist.

Psychological Warfare—its worth proved in World War II—has finally taken its place as a battle-tested adjunct of our fighting forces. After victory came in Europe, General Eisenhower wrote: "The exact contribution of psychological warfare toward the final victory cannot, of course, be measured in terms of towns destroyed or barriers passed. However, I am convinced that the expenditure of men and money in wielding the spoken and written word was an important contributing factor in undermining the enemy's will to resist and in supporting the fighting morale of our potential Allies in the occupied countries. Without doubt, psychological warfare has proved its right to a place of dignity in our military arsenal."

WAGING ANTISUBMARINE WARFARE

By

REAR ADMIRAL C. B. MOMSEN

WE CAN defend ourselves, within acceptable limits of loss, against any potential submarine threat during the next five or six years—providing two basic conditions are fulfilled: First, that our reserve fleet of surface ships, aircraft and submarines is mobilized and is equipped with the latest detection gear and the latest weapons. And, second, that personnel manning these units are well trained. Both of these conditions are more difficult of fulfillment than might at first appear; and neither of them can be accomplished overnight. With the passage of time, ships—and particularly aircraft—in reserve become over-age; and intensive reserve training is required to replace the combat experienced veterans of World War II who, as time goes on, will themselves become over-age.

Our antisubmarine tactics during the next few years will closely resemble those of World War II. The more distant future, however, will undoubtedly see the development of radical innovations in the field of undersea warfare. Technologically speaking, the submarine is still in its infancy. In order to be able to defeat the submarine of tomorrow, the Navy is sponsoring an extensive research program aimed at providing the best possible antisubmarine devices and techniques.

The key word describing antisubmarine measures of today is "massiveness." This is perhaps most graphically illustrated by the fact that the battle of the Atlantic in World War II cost us 100 billion dollars and the total energies of 25 per cent of the scientific talent of the United States and Great Britain.

One way of presenting the antisubmarine problem is to trace

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the course of a hypothetical enemy submarine, examining the extensive and elaborate antisubmarine measures which, out of necessity, have been developed—to obstruct its progress, to prevent it from accomplishing its mission, and to destroy it. This hypothetical submarine might be identified as the U-99 built, say, in the Wilhelmshaven area in 1943.

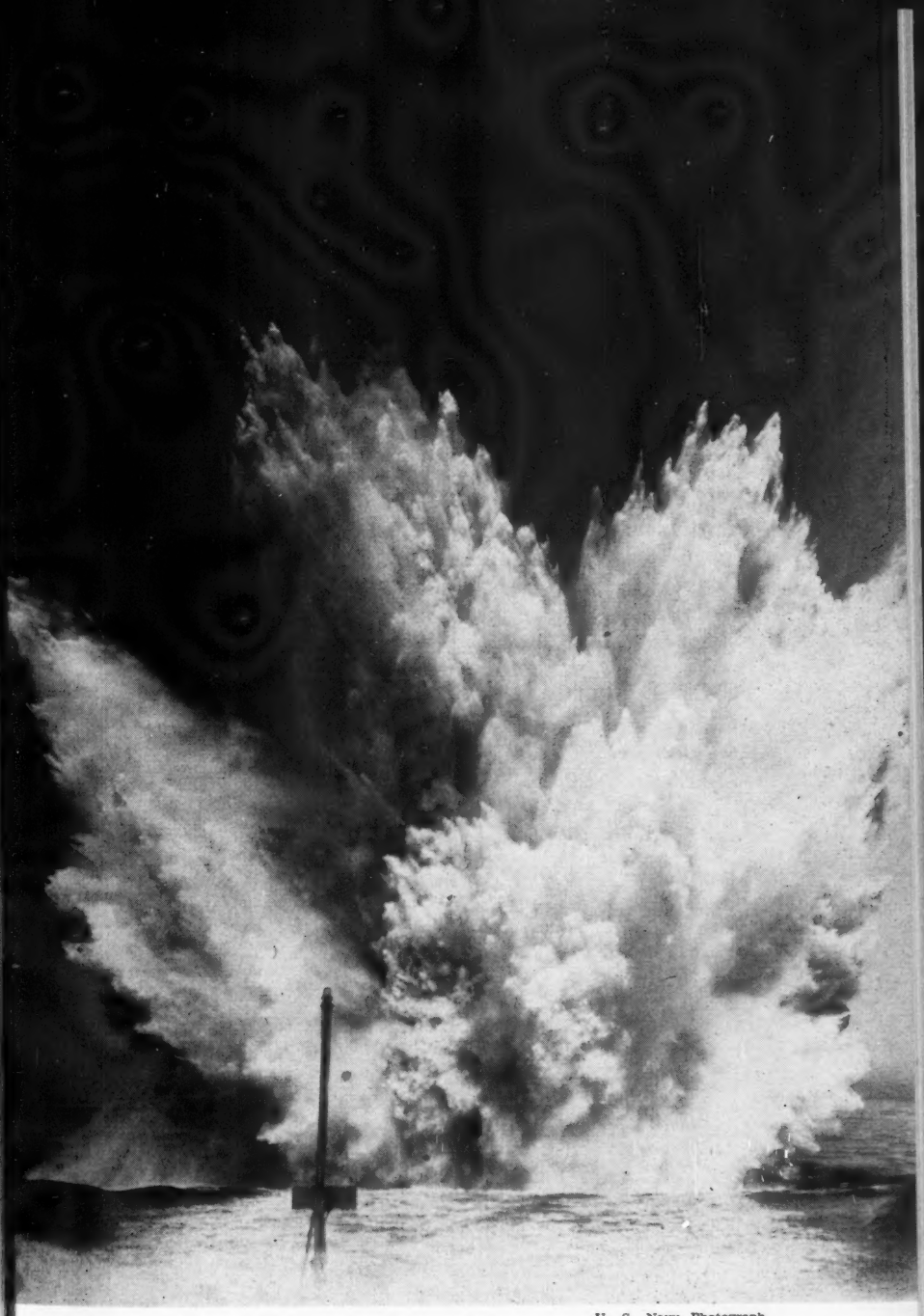
First, the Air Force attacks those target complexes where the U-boat's batteries, engines and periscopes are being manufactured, and the rail lines and marshalling yards over which these components must be shipped. These attacks are effective. The enemy, however, has dispersed his manufacturing plants. And these complexes represent but a few of many strategic targets that our Air Force must strike. Construction is disrupted or delayed on several of her sister ships, but the work on U-99 proceeds on schedule.

Air attacks again are launched, this time on the building yards themselves. Several hulls are damaged and some of the building ways and shops are temporarily put out of action. The U-99 is completed, with slight delays, and is sent to one of the laboriously constructed concrete submarine shelters for final fitting out.

Sporadic air attacks are launched at these protected shelters. Although damage here is slight, occasional attacks are necessary in order to force the enemy to expend part of his effort in keeping up the defenses of these shelters.

After the U-99 has completed her trials, she is ready for sea. The antisubmarine forces attempt to prevent her egress to the sea by the use of air- and submarine-laid mines. These mining operations sink several U-boats and require the enemy to resort to extensive minesweeping action. The U-99 and others of her kind pass safely through the minefields and are loose on the high seas. Their mission is to seek out and destroy our shipping.

We, or our allies, in an effort to detect the U-99 while she is in transit, maintain extensive radar-equipped air patrols over those areas which we can cover with land-based aircraft. If our area coverage is effective, we deny to the U-99 the ability to operate on the surface and force her to run submerged on her batteries or on her snorkel. This decreases her search rate, which may not be too important to her in transit; and it also slows down her speed of advance, thus increasing the time it takes her to reach her assigned patrol station. Radar detection of the snorkel is difficult, but some of the submarines in transit are detected. With the aid of radio-sonobuoys—which transmit



U. S. Navy Photograph

The blast of a depth charge spells doom for an enemy submarine. Note stern of attacking vessel in foreground.

to the aircraft the noise signals heard on their hydrophones—a few of the submarines contacted are successfully attacked.

In a further attempt to prevent enemy submarines from reaching their hunting grounds, barrier lines of our own submarines are laid across the most probable transit routes. In order to go anywhere at all, the U-99 has to make speed. If she moves she makes noise, and noise can be heard. The barrier submarines, lying motionless or nearly so, can hear her; and there is a good probability of being able to attack her with torpedoes.

Nothing is quite so destructive to submarine crew morale as the knowledge that enemy submarines may be lurking unseen, unheard, at any place and at any time—waiting for her, waiting, ready to strike. The essence of submarining is that the submarine can be almost anywhere in the ocean, unknown to her opponents. Certainly nobody knows this better than another submariner; hence, the disturbing thought of a lurking submarine bothers a submariner more than anything else.

The U-99 survives this tense situation and proceeds on her way in search of convoys. It will be assumed that somewhere along her route up to this point she has been detected and her most probable course has been estimated. A Navy hunter-killer team is directed into her general area.

The hunter-killer team is built around the antisubmarine aircraft carrier, escorted by half a dozen or more antisubmarine destroyers or destroyer-escorts. This deadly combination—a mobile antisubmarine base that combines the advantages of aircraft and surface craft and brings both types to bear on the enemy submarine—was particularly effective during the last years of World War II. The high search rate of antisubmarine aircraft against surfaced U-boats, combined with the underwater detection and tracking capabilities and the staying and hitting power of the destroyer, made U-boat operations at sea during the latter part of World War II extremely hazardous for the enemy.

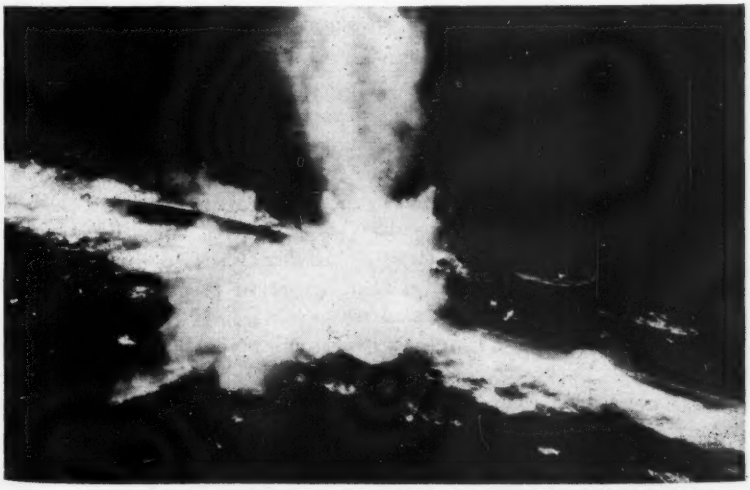
The U-99 evades the hunter-killer group, or at least is not successfully attacked, and proceeds on her way in quest of suitable targets. We shall suppose that the U-99 elects to patrol off the entrance of one of our major ports. Our harbor defense units have planted electronic acoustic and magnetic detection devices and booms and nets across the harbor entrance, to deny the U-99 access to the harbor itself. Our mining activities have planted defensive minefields, where feasible, in the vicinity of

the entrance. These minefields will normally consist of controlled mines, which may be exploded or armed to explode from the beach, in order to minimize the possibilities of damage to our own forces. Intensive patrols, both air and surface and probably including blimps, are deployed in the vicinity of the harbor entrance, in an effort to detect and destroy the U-99 before she can contact her quarry. If she is detected, she may expect to be heavily attacked by air-launched depth bombs, torpedoes or rockets, and by surface ship depth charges and ahead-thrown weapons.

If the U-99 has so far escaped lethal damage, she eventually makes contact with a convoy and is again plagued by the surface craft, planes and blimps which are escorting this convoy. If the U-99 successfully reaches an attack position and launches her torpedoes, she must still successfully disengage the antisubmarine forces in order to survive.

The U-99 faces this same risk on any subsequent attack; and when she starts the return trip to her base she must again risk action with the hunter-killer groups, the land-based air patrols, the hunter submarine, the minefields and even the continuing air attacks on her base facilities before her patrol can be successfully terminated.

This hypothetical narrative illustrates that the life of the enemy submariner is not a pleasant one; but it also illustrates



U. S. Navy Photograph

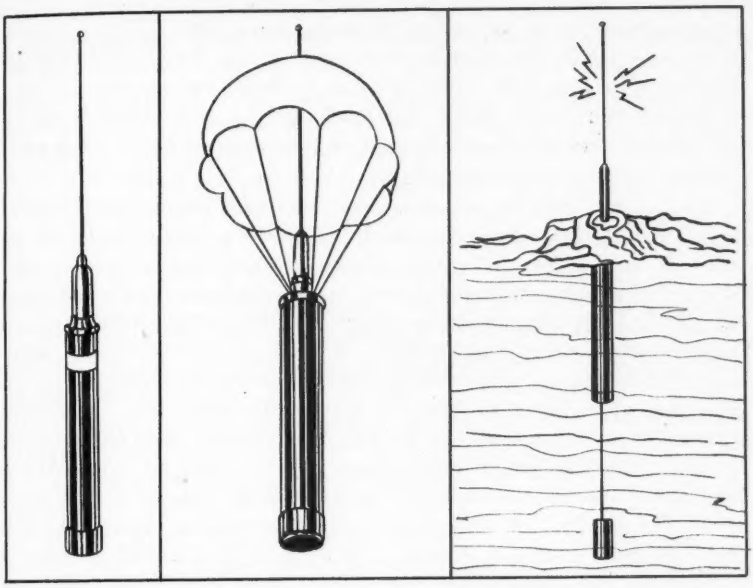
A German sub under attack by torpedo bombers during the Battle of the Atlantic, World War II.

the tremendous allied effort required to keep the enemy submarine situation under control. Force requirements for effective antisubmarine protection, on the basis of present operational equipment and weapons, are tremendous. If any one of the methods or techniques employed against the U-99 were 100 per cent effective, the other methods could be abandoned. The mere fact that some enemy submarines will survive the ordeal of the U-99 shows how far from 100 per cent effective each of these measures is. All of these methods must be applied with considerable skill and foresight if we are to give our vital merchant shipping adequate protection.

The great cost of such an antisubmarine effort is readily apparent. A few submarines on the prowl make the defender organize and maintain an antisubmarine effort that is out of all proportion to the manpower and materiel involved in the submarine effort. This wide discrepancy in size and expense, between the prowling submarine and the defense that must be organized, evolves from the central fact that a submerged submarine is most difficult to detect. Underwater detection devices are heavy and cumbersome. They work at only relatively short ranges, compared to the ranges at which the submarine can detect ships and shoot torpedoes. A submarine on the surface presents no greater problem than that of any other hostile ship of comparable size and armament. So long as it remains on the surface it presents only the traditional naval problem of ships and planes versus other ships and planes.

Whereas the surfaced submarine is no great threat, the submerged submarine is a real menace. The submarine skipper can see much farther with his periscope than he can be detected by his opponents. The situation is somewhat analogous to a number of blind men attempting to fight a man who can see. The seeing man has an overwhelming advantage, until he comes to close quarters with one or several of the blind men. The only way to overcome such an advantage is to increase the number of blind men; that is, to resort to large numbers of antisubmarine ships, planes and submarines. If the blind have enough people on their side to block the street or to surround any would-be attacker, they can win the fight.

The tactical books will be balanced for the antisubmarine forces if and when underwater detection ranges can be increased. Every technical avenue that might lead to a solution of the detection problem is being vigorously explored by our scientists. Every tactical method that could enhance the effi-



A valuable weapon in the antisubmarine arsenal is the radio sono-buoy which is dropped from patrol planes to pick up traces of suspected subs. At left, the buoy with its antenna extended; center, a parachute lowers the buoy to the water; right, the buoy in operation with antenna aloft, broadcasting to planes on patrol all sounds which it picks up from the depths. Note parachute draped on surface of the water.

ciency of our naval forces—air, surface and submarine—is being exploited. In no other field are the effects of a slight gain in technical advantage felt so quickly or so profoundly. A relatively small advance by one side or the other upsets the tactical balance out of all proportion to the comparative gain in technical efficiency.

The introduction of the snorkel, as an example, has upset the tactical balance rather heavily in favor of the submarine. This is because the submarine no longer need surface in order to charge its batteries or cruise on its engines. Instead of exposing the entire upper works of the submarine, as was the case in World War II, the snorkel submarine need only expose a gadget the size of a coal scuttle in order to use her engines. The difference in target size presented for radar or visual detection is obvious.

Undersea warfare resembles a huge, technical, competitive service enterprise involving millions of men and their coordinated use of an immense and complex variety of technical

equipment. There are three principal activities of this enterprise: research, production and operations. The inherent differences—in function, in viewpoint, in skills and in procedure—require that these three divisions of the Undersea Warfare enterprise be distinct—distinct in organization, in lines of authority, and in responsibility.

The distinction of organization does not imply any lack of cross correlation, all down the line. There is but a single measure of success for the entire enterprise—success in the operating division. The staffs on the top policy and programming level of all these divisions join together for planning and for mutual understanding. In reaching conclusions, this combined planning body must have before it the results of complete, continuing, and thoroughgoing analyses of operations—actual in time of war, simulated in time of peace. These must be analyses of the performance of equipment and of men, not only as individuals but also as elements in the entire system.

This concept is the foundation of the present undersea warfare organization of the Navy. Under the Chief of Naval Operations, the Assistant Chief of Naval Operations for Undersea Warfare heads up the operating side. Antisubmarine Warfare, Mine Warfare, Harbor Defense, Submarine Warfare and Shipping Control are subdivisions of his responsibilities. These undersea functions are performed by the fleets, as directed by the Fleet Commanders, under the guidance of the Assistant Chief of Naval Operations for Undersea Warfare.

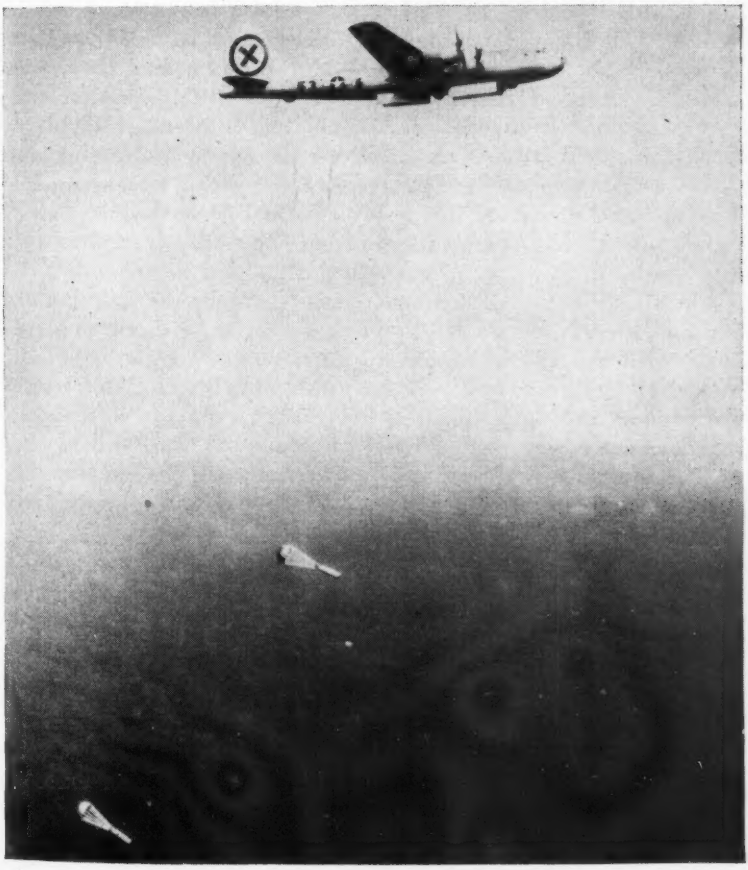
The production side is represented by the technical bureaus of the Navy Department. The weapons, ships, aircraft, and detection devices are produced, throughout the vast industrial organization of the Nation, under the direction of the Bureau of Ordnance, Bureau of Ships, and Bureau of Aeronautics.

The research side is a responsibility of the Office of Naval Research, organized within the Office of the Secretary of the Navy. Under the guidance of the Chief of Naval Research, research laboratories of the Navy, of industry, and of universities carry out research projects on vital undersea warfare problems. Last, but by no means least in importance, is the Operations Evaluation Group, distinguished scientists who are organized within the operations divisions of the Chief of Naval Operations. The Operations Evaluation Group conducts a continuing, thorough analysis of all undersea warfare operations. It evaluates new operational concepts and proposed new devices or weapons. The results of Operations Evaluation Group anal-

yses are always available to the heads of the operating, production and research divisions.

These three major divisions—research, production and operations—are working together to insure that any possible future U-99 will be neither a menace nor an uncontrollable problem.

The Navy's antisubmarine thinking does not envisage an impregnable line of defense. The enemy may have some initial success, but his triumph will be short-lived and costly.



U. S. Navy Photograph

A B-29 lays mines in Japanese home waters during the closing phases of World War II. Aerial mine-laying can deny strategic bodies of water to enemy subs.

ARMY MEDICAL RESEARCH IN THE FIELD

By

CONSTANCE C. SMITH

THE Army Medical Department is engaged in a 3½ million dollar research program. In Europe, the Far East, the Arctic, in tropical regions and other remote sections of the world, medical research teams—medical officers, veterinary officers, medical allied scientists, civilian specialists, and natives—are at work on projects assigned by the Research and Development Board of the Army Medical Department.

Plodding through the tall grasses of Malaya, tramping the deep snows of Alaska, or wading the flooded rice paddies of Japan, these teams gather specimens—human, animal, botanical, and inorganic—for field study. Eventually, their findings, along with specimens of pathological tissue, carrier-types of insects, rodents, snails—even samples of earth, air, and water—are made available for study to civilian groups, cooperating through the Armed Forces Epidemiological Board, and to the great military research and diagnostic centers in the zone of the interior—the Army Medical Department Research and Graduate School, the Armed Forces Institute of Pathology, and the Brooke Army Medical Center.

Research in the disabling liver disease known as infectious hepatitis is but one example among two hundred research and development projects under way in the Surgeon General's far flung program. Hepatitis has occurred during and after every war known to history. Thus far, scientists have not been able to determine the exact nature of the disease, and no specific treatment is known.

Because of the continued incidence of the disease in Germany after World War II, a center for research in infectious hepatitis was set up in 1945 at Bayreuth, and later was moved to Munich. A modern, five-story concrete building, which

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formerly housed the unwed mothers of Hitler's "Strength Through Joy" program, was requisitioned and converted into the 120th Station Hospital. Here a fully equipped, completely modern laboratory was installed. The staff of 38, headed by a Director of Research, includes 17 technicians and laboratory specialists. During 1948, more than 150,000 blood and urine laboratory tests were completed at the center.

At intervals of about four weeks, laboratory technicians pack marmite containers with dry ice and biological specimens—whole blood, blood serum, and urine from hepatitis patients—to be sent by special courier to cooperating laboratories in the United States. The laboratory at Yale University, besides collaborating in research, serves as the distributing center. It divides the specimens into small lots, and forwards them to other laboratories participating in the research, including twelve university laboratories scattered throughout the country. Other scientists, at the Patuxent Research Refuge at Laurel, Maryland, in cooperation with the Department of the Interior, are attempting to transmit the disease to birds and animals in the laboratory, so that drugs and other therapies being considered for treatment of human beings may be tested under controlled conditions. Thus, from Germany to Maryland, Army medical research teams in the field form an indispensable link in a globe-girdling research program.

The Army scientists, who work in cooperation with military

U. S. Army Photograph

A technician at the Armed Forces Institute of Pathology prepares slides of tissue sent in from the field for analysis.

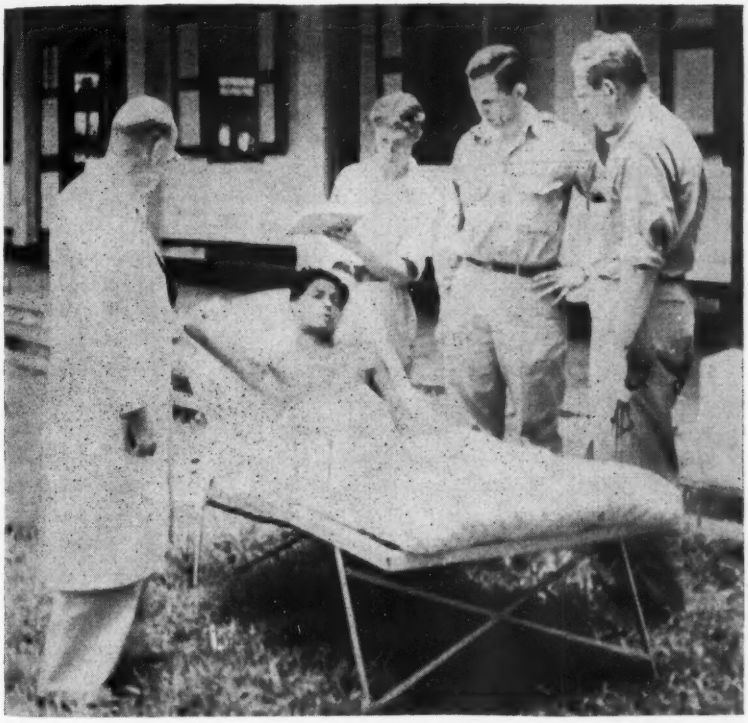
physician scientists and civilian consultants to the Surgeon General, wear the insignia of the Army Medical Service Corps. Within the Corps, the Medical Allied Sciences Section furnishes a wide variety of specialists.

Army physicians and scientists work hand in hand with physicians and scientists in civilian life. Not only does this avoid duplication of research effort; it also permits the pooling of knowledge—to the benefit of world medicine. Army research teams also cooperate with other Federal agencies and with the governments of friendly nations, as in the campaign for the conquest of typhus.

Typhus fever, in its various forms, has plagued the earth for many centuries. Army-sponsored tests during World War II proved DDT effective in destroying lice that transmit one kind of typus to the human body; and other Army tests contributed to the development of a preventive vaccine. But still, at the end of World War II, no highly successful treatment of typhus had been found. With our troops stationed in the Orient and other areas where the disease is endemic, Army scientists continued their research. Hundreds of pharmaceuticals were tested, until, finally, scientists of the Research and Graduate School found promise in chloromycetin (now called chloramphenicol)—an antibiotic agent. Army scientists suggested trial use of the drug, to determine its value in the treatment of rickettsial diseases.

By agreement with the governments of Great Britain and Malaya, a suitable area was selected in Malaya as a testing ground for the treatment of fever-stricken natives. A six-man research team of military and civilian scientists made its first expedition to Malaya, from March to September 1948; and a second investigation was conducted from December 1948 to May 1949. The observations of these two expeditions have set milestones in modern medicine. The team found chloromycetin to be a specific drug for the treatment of scrub typhus, murine typhus, and typhoid fever. The scientists also demonstrated the efficacy of this drug in the treatment of gonorrheal urethritis. Another new drug, aureomycin, was found to be of value in the treatment of scrub typhus. The team will undertake its third expedition in the fall of 1949—a project that is expected to last three years.

In the Far East, the 406th Medical Laboratory, in Tokyo, serves as a bulwark for Army medical research. Cooperating with medical teams in the Ryukyus, the Marianas-Bonins,



U. S. Army Photograph

Members of a medical research team check on the condition of the first scrub typhus patient to receive chloromycetin, Malaya, 1948.

Guam, and Okinawa, this Laboratory—staffed by ten Army physicians, ten Medical Service Corps scientists, a Veterinary Corps officer, and twelve civilian scientists and technicians—is engaged in the study of all oriental diseases that may affect the health of our military personnel. Among the more important problems being investigated are: Japanese encephalitis, schistosomiasis, scrub typhus, and diseases caused by intestinal parasites. The Laboratory ships biopsy and autopsy material to the Armed Forces Institute of Pathology, and to the Army Medical Department Research and Graduate School, where research is coordinated with field studies.

In an effort to control Japanese encephalitis, a malady resembling "sleeping sickness," the 406th is conducting field trials of a vaccine developed and prepared at the Research and Graduate School. The two research centers—the School

and the 406th—are combining their efforts to increase the vaccine's potency.

Since the method by which Japanese encephalitis is transmitted has not been determined, entomologists are investigating other aspects of the disease. With the mosquito considered the most likely carrier of the disease, Medical Service Corps scientists with the 207th Malaria Survey Detachment, in Kyoto, are conducting a mosquito survey of Japan. During the 1948 summer epidemic of encephalitis in Japan, these entomologists collected 45,000 adult mosquitoes for shipment to the Hooper Foundation at the University of California, where virus studies are made.

The 406th Medical General Laboratory is carrying out an equally broad program in the study of schistosomiasis, a disabling oriental disease characterized by dysentery, anemia, and enlargement of the liver and spleen. Caused by an organism which depends upon water snails as well as upon the human body as hosts, schistosomiasis is often contracted by persons who wade through the flooded rice paddies of Japan and the coast of China. The breeding habits of water snails are being studied; and, in widespread areas of Japan, molluscicides are being tested for control of the carriers.

At the request of SCAP, the Laboratory's scientists also are conducting complement fixation tests for the serologic diagnosis of typhus fever among the Japanese, using techniques recommended by the Research and Graduate School.

Probing health problems in still another climate, Army medical research in the Arctic began during the winter of 1946-47 at Fort Churchill, Canada. Factors affecting physiology, psychophysiology, military medical equipment and insect control were investigated. Studies were conducted by the Army Medical Department, with the Air Force, the Navy, and the Department of Agriculture participating.

Three of the studies dealt with nutrition research. At Fort Churchill, a nutrition research team—consisting of a Medical Service Corps nutritionist and two enlisted men—conducted three 10-day surveys of food consumption by a joint Canadian-American 100-man mess, to determine food intake among men given a free choice of a wide variety of foods. Laboratory analyses were made of typical meals, to determine the fat, protein, carbohydrate, and vitamin content.

At Camp Shilo, Canada, another team studied the problems of survival in cold among thirty-two Air Force enlisted men

who had volunteered as research subjects. The airmen were acclimatized to heat, then transported abruptly to a cold climate, where their metabolic rate and nutritional requirements were studied. At Ladd Air Force Base, in Alaska, a third team observed the voluntary food intake of 200 troops. It was found that men on duty in the Arctic region, while eating a substantial 5000 calories a day at meals, still consumed additional amounts of calories between meals, at snack bars. The Army apparently would have to devise ways of enriching their regular mess diet.

Meanwhile, other nutrition studies had been initiated in the occupied zones of Germany. A civilian specialist recently was sent to Germany to collect and organize data obtained in previous surveys, the object being to determine the amount of food necessary to maintain the population of the United States Zone during a period of military occupation.

In all, the Army Medical Department's research program, in the field and in the zone of the interior, comprises about two hundred projects. During a typical month, ninety-three of these were conducted under contract to civilian universities,

U. S. Army Photograph

Members of a malaria control team spray a native dwelling, Okinawa, 1945.

two under contract to individuals, and the remainder in Army medical installations. All projects are administered by the Medical Research and Development Board, Office of The Surgeon General. Areas of study under consideration for the future include: the control of oriental diseases, such as leishmania and cholera, and more intensified studies in the control of schistosomiasis. Increasing attention also will be given to the study of psychiatric and psychophysiological problems of military life.

Medical research in the Army has grown from small beginnings. One hundred years ago medical research teams were unknown in America. The earliest report of recognized medical research in the United States Army was published in 1833, when William Beaumont reported his "Experiments and Observations on the Gastric Juice, and the Physiology of Digestion." Although many studies by medical officers on bird life and meteorology are recorded, it was not until the 1870s that Army medical officers turned their attention to studying the causes of disease. In 1877, Captain A. C. Girard, Assistant Surgeon, introduced Lister's antiseptic method into Army hospitals. In 1879, Colonel John Shaw Billings established the *Index Medicus* which, expanded through the years to 54 volumes, has come to be recognized as perhaps the greatest medical bibliographic work ever accomplished.

During the years that followed, Army research, like all medical research, was influenced by the discoveries of Lister, Pasteur, and Koch, who opened the way for Major Walter Reed to discover the cause of yellow fever, for General Gorgas to rid Panama of this disease, and for the Army's later scientists to contribute notably to modern medicine.

Today, medicine is no longer a study unto itself. Interrelated with bacteriology, entomology, chemistry, physics, atomic energy, engineering, and other fields, medical research goes forward with all of modern science. Yet in one respect, particularly, Army medical research retains a special identity. In contrast to the newly separated medical research of the Air Force, which concerns itself with the problems of men in flight, medical research of the Army is earthbound—concerned with the interwoven destinies of things small and great: insect and beast, snail and bird, virus and man, that live on, or very close to, the earth.

FLIGHT SERVICE BRINGS THEM IN

By

MAJOR LEILYN M. YOUNG

WITH its fuel tanks running dry and an engine threatening to quit, a huge Flying Boxcar transport is lost in the "soup" near Washington. Using the only radio that still functions, the pilot transmits a distress signal to the control tower at Andrews Air Force Base, Maryland. The tower operator, in turn, rushes a telephone call to the Flight Service Center at Olmsted Air Force Base, Pennsylvania. Within seconds, a sector operator at the Flight Service Center alerts all airports in the Chesapeake Bay area, and the Flying Boxcar (a C-82) is monitored by radar to a safe landing at Patuxent Naval Air Station, Maryland. A crash is averted and the C-82 is saved —another example of teamwork by Flight Service specialists devoted to the cause of safety in flying.

Flight Service is an Air Force operating agency, one of four service subdivisions of the Military Air Transport Service (MATS). The others are Airways and Air Communications Service (AACS); Air Weather Service (AWS); and Air Rescue Service (ARS). Both the communications network of AACS and the forecasts of AWS are used continually by Flight Service; and the Air Rescue Service goes into action after Flight Service has reported an aircraft missing.

Flight Service follows the progress of aircraft in flight, so that the position of every military aircraft in the air is known to one of the Flight Service Centers. It provides an advisory service to pilots of all Armed Forces aircraft; and under certain conditions it, alone, can authorize a pilot to begin a flight. In effect, it performs the function of an air base operations office, but on an area level. It reports violations of flying

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MAJOR LEILYN M. YOUNG, Inf., is an Associate Editor of The DIGEST.

safety regulations to the proper authorities; and it maintains a current file of information about all airfields, for use in emergency. It plans for hurricane evacuation and, when necessary, alerts the commanders of air bases in the path of a hurricane.

Each of the nine Flight Service areas in the United States is controlled by a Flight Service Center. Centers are located at the following Air Force bases—Maxwell at Montgomery, Alabama; Carswell at Fort Worth, Texas; Wright-Patterson at Dayton, Ohio; March at Riverside, California; Lowry at Denver, Colorado; Hamilton at Hamilton Field, California; MacDill at Tampa, Florida; McChord at Tacoma, Washington; and Olmsted at Middletown, Pennsylvania. Headquarters, Flight Service, is at Washington, D.C.

Largest and busiest, yet typical of all centers, is Olmsted Flight Service on the flood plain of the Susquehanna River, ten miles east of Harrisburg, Pennsylvania. There, 63 officers of Flight Service—teamed with 16 forecasters of AWS and 135 men of AACS—supervise the flights of all Armed Forces aircraft in their area, extending from Maine to South Carolina and inland to Ohio. A round-the-clock, seven-day-week operation, Olmsted Flight Service is a nerve center through which passes all vital information concerning every flight of military aircraft within its area.

Amid the clattering of teletypes and the buzzing of 70 direct-line telephones, the Flight Service team labors to provide the maximum safety for those who fly the planes. An interphone system connects the center with all 55 military air bases and with the 15 AACS very-high-frequency radio stations within the Olmsted area.

Flight Service supervisors, coordinators and sector operators are active, rated Air Force pilots. An extensive training program prepares each newly assigned pilot for Flight Service duty. The pilot devotes 104 training hours' study to flying regulations, geography and weather of the area, and to orientation and familiarization with the operation of a center. He then spends from 30 to 60 days in closely supervised on-job training as an assistant sector operator. Not until he is thoroughly trained is he permitted to act as a sector operator.

At a telephone key box—terminal of the vast interphone network—sits a sector operator, teamed with other sector operators when the volume of flights requires it. Red, green, and white lights flash in coordination with a buzzer, to an-

nounce incoming telephone calls. The pilot of an Air National Guard aircraft based at a civilian airfield telephones his proposed flight plan and requests clearance for a take-off. An AWS forecaster, alerted by the sector operator, immediately briefs the pilot on weather conditions anticipated along the route and at the destination. While the forecaster is briefing the pilot, the sector operator checks the pilot's proposed flight plan. If all conditions—such as amount of fuel aboard, distance to be flown, estimated time en route, pilot rating, and type of flight (visual or instrument)—meet minimum safety standards, the sector operator authorizes the pilot to proceed.

In another instance, Olmsted Airways—the AACS very-high-frequency radio station at the Middletown air base—relays to Flight Service a radio message from an aircraft flying 20 miles to the northeast. The pilot requests permission to alter his flight plan. Instead of flying by instrument from Harrisburg west, as originally cleared by Westover Air Force Base, he would rather continue by visual flight rules—flying with the ground in sight. Weather conditions and visibility have improved markedly, he reports. After checking with the fore-

USAF Photo

A sector operator takes a call from a plane in flight.

caster, the sector operator sends a message to the pilot, authorizing the new flight plan.

Whenever the sector operator writes an original flight plan, authorizes a change in route for an aircraft in flight, or notes the arrival of an aircraft at its destination, he passes the flight plan or message—in abbreviated form—to the coordinator at a nearby desk. From AACS teletypes, the coordinator receives reports on all flight plans cleared at all military air base operations offices in the Flight Service area. He is notified when military aircraft in the area depart on extended flights. He receives all position reports from pilots of aircraft in flight, and all notices of arrival of aircraft at military air fields in the area. In addition, other Flight Service Centers notify him when the aircraft that they have cleared are scheduled to fly over or land in his area.

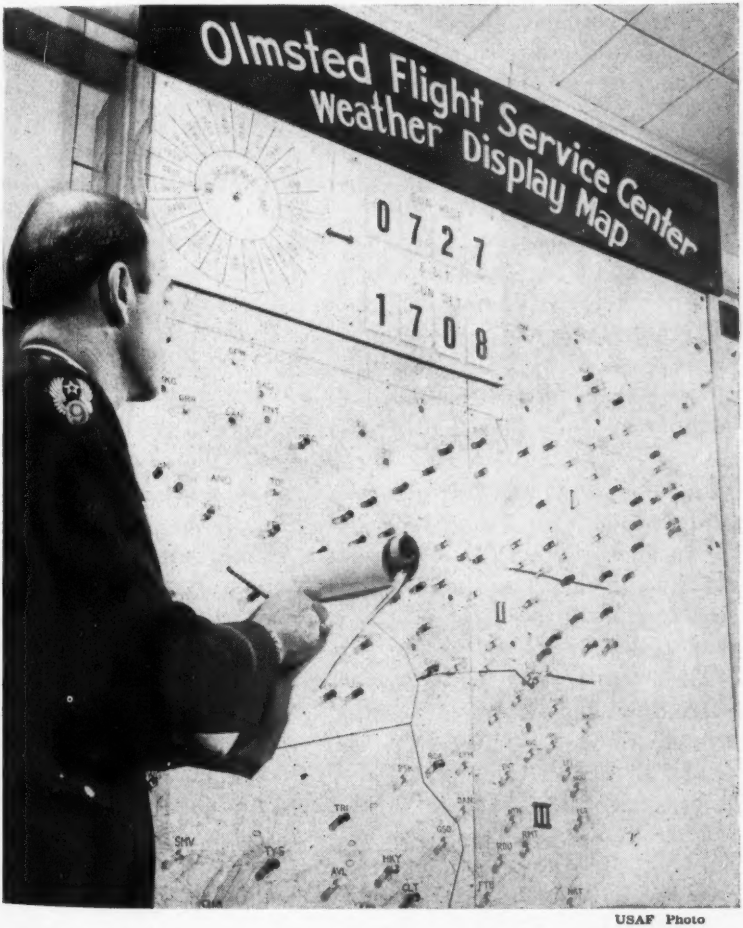
The coordinator funnels all flight plans to the sector operator for scrutiny. The latter rechecks the plans for errors in safety factors. If a flight is by visual rules, the plane must carry sufficient fuel to keep it aloft for 30 minutes after the estimated time of arrival. For an instrument flight, the aircraft must carry enough fuel to fly on to a designated alternate field—with 45 minutes' flying time to spare—in the event that reduced ceiling and visibility close the initial airport for landings.

The coordinator passes all messages to the sector operator—the specialist who keeps track of each aircraft in flight, from take-off to landing. The sector operator collates and files, in a visual card index, all information pertaining to each aircraft and its flight. He tags each flight with the estimated time of arrival, and thus is able to spot instantly all overdue aircraft.

An aircraft is considered overdue when no arrival report is received by Flight Service within one hour after its estimated time of arrival. If a plane is overdue, the sector operator checks by interphone to determine whether the plane has landed safely at its destination. Should the plane remain unreported after a complete communications search, Flight Service alerts Air Rescue Service. A search and rescue operation is begun in the area determined as the probable location of the crash or unreported landing.

The sector operator also initiates "advisories" to pilots in flight. When a sudden deterioration in weather conditions sets in along the route of a flight, for example, the sector opera-

tor notifies the pilot. If the pilot is flying by visual flight rules, it may be suggested that he change to instrument flying. The pilot is not ordered to make the change, merely advised. Usually, however, the pilot takes the initiative and requests that he be authorized to change his flight plan so as to permit him to begin instrument flying. The new flight plan provides an alternate destination. In such cases, however, the Civil Aeronautics Authority must specify the altitude



USAF Photo

Varied-colored glass markers on this map represent changing weather conditions at airfields throughout the northeastern United States.

and time interval which the pilot is to maintain behind any aircraft flying on the same course and at the same height.

Frequently Flight Service is called upon to assist an aircraft which has lost its way. Flight Service thereupon requests those radio direction-fiding stations which are able to receive a signal from the lost plane to take a "fix" on the craft and to report this compass reading to the center. The sector operator plots these bearings on a map and determines the plane's position at the intersection of two such plotted lines. Additional fixes from other radio stations enable Flight Service personnel to determine more accurately the plane's location. The pilot is then directed to fly a compass course leading to a point that he will recognize. Thus the lost pilot regains his bearings.

Using this method of direction finding, Olmstead Flight Service last winter saved a trainer aircraft lost in the fog. The Olmsted sector operator alerted various radio stations to fix the plane's position. The aircraft was guided through "soup" and icing conditions to a safe landing at Washington, D. C. When the plane finally rolled to a stop on the runway, its tanks contained only a 20-minute supply of fuel.

As part of its administrative and coordinating functions, Headquarters, Flight Service prepares the Joint Military Aircraft Hurricane Evacuation Plan. This master plan assigns refuge fields for all Armed Forces aircraft based in the hurricane danger zone. The danger zone is a coastal strip 100 miles wide from Maine to Brownsville, Texas. Flight Service —warned by AWS of an approaching hurricane—alerts all air base commanders in the immediately threatened area, and it is the responsibility of these local commanders to accomplish the evacuation. In 1948, during five major hurricane warnings, 2431 aircraft were evacuated to refuge fields.

Nation-wide during 1948, the 470 Air Force officers and enlisted men of Flight Service cleared 277,431 aircraft, followed 1,621,989 flights, and issued more than 45,000 advisory messages. More than 10,000 pilots were induced to alter their courses en route, in order to avoid hazardous flying conditions. In all, Flight Service estimates that it saved the American taxpayer 15 million dollars in 1948—savings directly attributable to Flight Service aid and to the avoidance of aircraft crashes by military pilots.

OFFICERS' ATTITUDES TOWARD THEIR CAREERS

By

IRA H. CISIN

IN THE course of his professional career, today's Army officer may perform a wide variety of duties; but, in general, his total career pattern—the central theme of his career development over the years—will tend to be in one of two main directions: either (1) command, operational, "line;" or (2) technical and logistical.

In the Army, the distinction between operational or combat officers, on the one hand, and logistical or technical officers, on the other, is not so sharply drawn as in the Navy, with its line and staff corps officers, and in the Air Force, with its rated and non-rated career groups. Even membership in the ground combat arms or in the technical services is a fallible criterion for classifying an Army officer into one or the other career type. This is because of the mobility of Army officers and because so many assignments in the ground combat arms involve logistical duties.

About half of all the Regular Army officers now in the United States identify their careers with technical or logistical pursuits, while the other half consider themselves line, operational or combat officers. This fact was brought out in a recent study of officers' attitudes toward their careers, prepared by the Attitude Research Branch, Armed Forces Information and Education Division, for the Industrial College of the Armed Forces. Anonymous questionnaires were administered to 1475 officers, constituting a scientifically selected cross-section of male Regular Army officers (including Air Force officers on duty with the Army) in the United States. For brevity, the attitude study re-

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ferred to operational or line career patterns as Career O; and to technical or logistical career patterns as Career T.

Officers who identified themselves with Career O tended to be younger than T officers. Since permanent rank is closely related to age, T officers—who were older, as a group—tended to outrank O officers on the permanent list. Temporary promotion opportunities appear to have been approximately equal for the two groups, in that the average T officer wears insignia of a correspondingly higher grade than the average O officer.

As for educational achievement, three out of four Regular Army officers—whether in the T career group or the O career group—reported that they were college (or service academy) graduates. The T officers, however, are more likely than O officers to possess Masters' or Doctors' degrees. Service academy graduates were considerably more likely to identify themselves with an O career than with a T career, thus raising the average educational level of the O group of officers. When only non-West Pointers are considered, however, the T group shows a higher proportion of college graduates than the O group.

Today's Regular Army officer, like the member of any respected professional group, is reluctant to give up his membership in the profession. With little variation between the groups, the great majority (86 per cent) said they intended to stay in service until retirement. Only two per cent of the officers said they intended definitely to leave the service before retirement; and the remaining 12 per cent said they were undecided. Resignations were more likely to come from officers who have the least accumulated service—and who therefore have the smallest equity in the all-or-nothing retirement annuity.

Most of the officers who planned definitely to leave the service before retirement, as well as those who were undecided, gave a constellation of reasons for their feelings. The most frequent complaints were: inadequate pay; unacceptable living conditions for themselves and for their families; insufficient opportunity for promotion; dissatisfaction with some aspect of classification and assignment; and a wide variety of personal reasons.

The Attitude Research Branch study made no attempt to measure satisfaction within specific career fields. Rather, the study concerned itself primarily with officers' desires to switch career fields—from technical to operational, or from operational to technical. Only about one officer in six—among both T officers and O officers—expressed a desire to change careers now. The

great majority said they did not want to change career patterns at this stage of their careers, in view of their past training and experience and the interest they had developed in their work. In other words, they felt that they had invested a good deal of time and effort in their present careers—an investment which would make it unwise to change now. Even when asked which type of career they would choose if they could "start over now as a second lieutenant," only about one in four of the T officers and one in five of the O officers expressed a desire to change.

In evaluating the goals attainable through military service, O officers were more likely than the T officers to value especially the attainment of high rank and high command. T officers were slightly more likely than O officers to rate as an important goal the attainment of a high-level *staff* position. There was little or no difference between T officers and O officers in the importance they attach to recognition from high-level commanders and from other officers; recognition from civilians; and the desirability of a comfortable home and family life.

Like most other professional groups, Regular Army officers' goals are directed more toward attainment of a highly respected position within their own professional group than toward the achievement of status outside the group. Thus, taking T officers and O officers together, recognition from other officers was most frequently rated as an important goal. Recognition from civilians, on the other hand, was least frequently rated as an important goal.

Only a few officers, in either the T group or the O group, maintained that the T career required more leadership ability than the O career. As might be expected, the O officers were more likely to feel that their own specialization required more leadership ability. The T officers were more inclined than the O officers to feel that the two career patterns required equal leadership ability.

When asked which career required greater native mental ability, more than 90 per cent of the T officers indicated that their own career pattern required at least as much in the way of "brains" as the O pattern did; while only about three out of four O officers felt their own specialization required as much mental ability as the T pattern. Relatively few officers said that the O career required more training than the T career, although O officers were more likely than T officers to feel this way.

A predominant opinion among both T officers and O officers was that junior officers in the O group have greater opportunity for promotion than T officers, but that such opportunity should be equal. Similarly, in achieving high rank, the majority in both groups believed that O officers now have a better chance to attain high rank, but that all officers should have equal chances. In regard to promotion opportunities and the opportunity to attain high rank, although a majority of O officers favored equality for the two career groups, a substantial minority said they would prefer that the O career keep its advantages.

A majority of both T officers and O officers said that men in the O career have a better chance to gain respect and recognition from their fellow officers and from high-level commanders. A majority of both groups said the two career types were equally deserving of such recognition; but again the O officers were less likely than the T officers to feel that their present advantage should be abolished.

O officers were about evenly split as to whether their own group or the T group had a better chance to get respect and recognition from the civilian populace. But a majority of the T officers felt that the O group had the advantage in this regard. A majority of both the T group and the O group felt that the two types of officers deserved equal recognition from civilians.

Most officers in both career groups were agreed that the T officer has a better chance than the O officer to be at home with his family; and virtually all officers expressed the feeling that the T career offered its adherents a better chance to accumulate service experience which would be of value in post-retirement civilian occupations.

Perhaps the most important finding of the attitude study is that virtually all these officers—T and O alike—recognized a need for understanding one another's problems. Almost unanimously, they expressed support of a program of cross-training which would require each operational officer to receive a certain amount of training and duty in logistical work; and, with only slightly less fervor, they supported a program that would provide logistical specialists with a certain amount of training in the line. In each case, the median time recommended for an officer to spend in positions outside his own career pattern was 5 years in a 30-year career.

NATIONAL SECURITY ACT AMENDED

With passage by the 81st Congress, and approval by the President, of the National Security Act Amendments of 1949 (PL 216), the original Act was strengthened, the position and powers of the Secretary of Defense were clarified and strengthened, the status of the armed services was reaffirmed, a chairmanship was established for the Joint Chiefs of Staff, and budgetary practices were reformed, with a view to accomplishing huge savings.

The National Military Establishment was converted into an Executive department—the Department of Defense. The law provides for three military departments—separately administered—for the operation and administration of the Army, the Navy (including Naval aviation and the Marine Corps), and the Air Force, together with their assigned combat and service components. The departments will be under the coordinated and unified direction of the Secretary of Defense, but they will not be merged. While the law provides for the strategic direction of the Armed Forces, for their operation under unified control, and for their integration into an efficient team, it specifically prohibits a single Chief of Staff over the Armed Forces or an Armed Forces General Staff. This prohibition does not apply to the Joint Chiefs of Staff or to the Joint Staff.

The combat functions of each of the services cannot be transferred, reassigned, abolished or consolidated. The Secretary is prohibited from spending funds or transferring personnel in such a way as to impair the respective combat functions. Furthermore, no function of the Department of Defense can be substantially reassigned or transferred, abolished or consolidated, until a full report has been made by the Secretary to the Armed Services Committees of the Congress. Semiannually, or oftener, the Secretary of Defense will submit to the President and to the Congress a detailed report of the work, expenditures and accomplishments of the Defense Department, together with recommendations, and with separate reports of the three military departments.

Any of the departmental secretaries or any member of the Joint Chiefs of Staff, on his own initiative but after informing the Secretary of Defense, may submit to the Congress at any time a recommendation concerning the Department of Defense.

The three military departments will be administered by the secretaries under the direction, authority and control of the Secretary of Defense. The Secretary of Defense, unless specifically prohibited by law, may perform any function vested in him, with the aid of such officials and organizational entities of the Department of Defense as he may designate.

There will be a Deputy Secretary of Defense, (instead of an Under Secretary), and three Assistant Secretaries, all appointed from civilian life. The Deputy may not have served as a commissioned officer in a Regular component within ten years; and the same holds for the Secretary. Precedence is established as follows: Secretary of Defense, Deputy Secretary of Defense, Secretary of the Army, Secretary of the Navy, Secretary of the Air Force, the Assistant Secretaries of Defense.

The National Security Council no longer will include the three departmental secretaries. The Department of Defense will be represented by the Secretary alone. However, the departmental secretaries and under secretaries, the Chairman of the Munitions Board, the Chairman of the Research and Develop-

ment Board and others may be appointed by the President (with the consent of the Senate) to serve at his pleasure.

The War Council is replaced by an Armed Forces Policy Council, composed of: the Secretary of Defense, Chairman, with power of decision; the Deputy Secretary; the three service secretaries; the Chairman of the Joint Chiefs of Staff; the three military chiefs. The Council's primary function is to advise the Secretary of Defense on broad policy relating to the Armed Forces.

The Joint Chiefs of Staff will consist not only of the three military chiefs, as in the past, but also will have a chairman. While the chairman will be the presiding officer, he will have no vote. He will be appointed by the President (with consent of the Senate) from among the Regular officers of the services. He will be appointed for two years, and will be eligible for one reappointment (except that in time of war there is no such limitation). He will take precedence over all other officers, but will not exercise military command over the JCS or any of the services. He will provide the agenda for the Joint Chiefs of Staff and will assist them in expediting their business; and he will inform the Secretary of Defense (and under certain conditions, the President) on issues on which agreement has not been reached. As for the Joint Staff, the past limitation of 100 members has been raised to 210, comprising approximately an equal number from each of the three services, appointed by the Joint Chiefs of Staff.

The relationship of the Munitions Board to the Secretary of Defense is strengthened, placing the chairman of the Board, a civilian, directly under the authority of the Secretary. The chairman will have the power to act for the Secretary, not merely to recommend to him.

The relationship and authority of the Research and Development Board is clarified and strengthened in the same manner.

The rate of pay for members of advisory committees and part-time advisors (not already holding paid Government positions) is increased from a maximum of $35 a day to a maximum of $50 a day.

A Comptroller of the Department of Defense—a new position—is authorized under the Act. He will be one of the Assistant Secretaries of Defense. He will supervise budget estimates of the Department of Defense, and will establish and supervise the principles and policies covering: (1) preparation and executing of budgets; (2) fiscal, cost, operation, and capital property accounting; (3) progress and statistical reporting; and (4) internal audit. He will establish and supervise policies and procedures for spending and collecting funds; and he will establish uniform terminologies, classifications and procedures.

There will be a Comptroller and a Deputy Comptroller in each of the three service departments, and departmental budget and fiscal organization will be consistent with that in the Office of the Secretary of Defense. The departmental comptrollers may be either military or civilian; but where a departmental comptroller is military, his deputy will be civilian. The comptrollers are directly responsible to their respective service secretaries, but also have a concurrent responsibility to the military chiefs.

Budgets will be prepared on a "performance" basis, so that the Secretary of Defense will be able to determine the cost of performance of functional programs and activities that can be readily identified. Operating and capital programs will be segregated within the budgets. During the period of conversion to the new system—that is, until the end of 1952—the Secretary of each military department will make the adjustments in obligated funds that are necessary to reflect "performance" costs.

Beginning in the fiscal year 1951, appropriations made to the Department of Defense or to the military departments will be available only after the Secretary of Defense has approved the scheduled rates of obligation.

The Secretary of Defense is authorized to establish working-capital funds for the purposes of financing inventories of supplies and equipment, and providing working capital for industrial and commercial activities that provide common services within the Department of Defense. Working-capital may be provided, until 31 December 1954, by trans-

fer from unexpended balances and by capitalizing inventories on land.

In order to provide working capital, where the costs of operations are not susceptible of being immediately charged against appropriations, there is established in each of the three services a Management Fund, with $1,000,000 capitalization in each case.

When any function or activity is transferred from one department to another, the money for this activity also will be transferred and will not revert to the Treasury, as heretofore. Personnel who are transferred with the activity will be credited and debited to the respective personnel ceilings. Disbursing offices of the three departments are authorized to make disbursements for any of the departments, with subsequent adjustment of accounts. Property records of the three departments will be kept on both a quantitative and monetary basis, and will include fixed property, installations, and major items of equipment, as well as the supplies, materials and equipment held in storage.

DIGEST OF LEGISLATION

Prepared for The DIGEST by Joseph M. Howorth,
Legislative and Liaison Division, Department of the Army

¶*Travel Expense Act of 1949. (Public Law 92—81st Congress)*

Raises from $6 to $9 the maximum per diem allowances in lieu of subsistence granted Government officials and employees, traveling on official business away from their designated posts of duty within the United States. Per diem allowances for Government employees on travel status outside the continental United States are set by the Bureau of the Budget. Also, raises mileage allowances to not to exceed 4 cents a mile when a privately owned motorcycle is used, or 7 cents a mile when a privately owned automobile or airplane is used.

¶*Percentage of Aviators in the Air Force and Navy in Enlisted Status. (Public Law 103—81st Congress)*

Repeals those sections of the enactments of 3 June 1916 and 24 June 1926, as amended, which stipulated that, in time of peace, at least 20 per cent of the pilots employed in aviation tactical units of the Navy, Marine Corps, and Air Corps shall be enlisted men; however, provides that at least 20 per cent of Navy and Air Force aviation cadets shall be enlisted men.

¶*Disability and Death Benefits for Members of the Reserve Components. (Public Law 108—81st Congress)*

Extends to Reservists and National Guardsmen killed or injured while on duty for periods of less than 30 days, the same benefits that they would heretofore have received only if serving for periods of more than 30 days.

Heretofore, reservists on extended active duty—*i.e.*, periods of service in excess of 30 days—if disabled or killed in line of duty, received hospitalization, pay, death benefits, and, if permanently disabled, retirement benefits, the same as members of the Regular establishment. Reservists on duty for shorter periods, however, had little or no protection, except hospitalization, disability compensation, and survivor pensions in death cases when authorized by the U. S. Employees' Compensation Commission. Or they could elect, in lieu of these, the disability compensation and survivor pensions in death cases, as authorized by the Veterans Administration.

The Act applies to Reserve personnel of the Army and Air Force, and to members of the National Guard suffering death, disability, or injury in the line of duty during inactive-duty training, including drills, or during active-duty training periods of less than 30 days' duration—regardless of whether the reservist is serving with or without pay. The injured reservist is authorized to receive full active-duty pay and allowances while hospitalized.

The Act extends to reservists on short training periods the following benefits: (1) hospitalization with active-duty pay, (2) retired pay (where disability retirement is warranted) and (3) payment to beneficiaries of a six-month pay gratuity where death results. The Act applies retroactively to those reservists who have been killed or injured in training since 14 August 1945.

¶*Civil Service Retirement Credits. (Public Law 123—81st Congress)*

Grants credit toward retirement, under the Civil Service Act of 29 May 1930, as amended, for actual service performed even though, through inadvertence, no deductions from salary are made.

¶*Prosecution of Claims by Retired Officers. (Public Law 137—81st Congress)*

Provides that certain disqualifications applicable to persons prosecuting claims against the United States Government under existing provisions of law shall not be applicable to retired officers of the Armed Forces not on active duty, by reason of their status alone. A retired officer, however, may not, within two years next after his retirement, prosecute, or assist in prosecuting, a claim against the United States involving the department in which he holds a retired status, or involving any matter with which he was directly connected while on active duty.

¶*Government Printing Work in the Field. (Public Law 156—81st Congress)*

Authorizes certain Government printing, binding, and blank book work to be performed elsewhere than at the Government Printing Office, if approved by the Joint Committee on Printing.

¶*Employment of Enlisted Men and Officers by Bureau of the Census. (Public Law 158—81st Congress)*

Continues the authority of the Bureau of the Census to utilize the services of other Government employees (including Armed Forces officers and enlisted personnel) for field work in connection with each decennial census. Armed services personnel (both officers and enlisted) may be appointed and compensated by the Bureau of the Census for enumerating personnel of the Armed Forces at military posts and stations.

¶*Payment of Claims by the Comptroller General. (Public Law 159—81st Congress)*

Authorizes The Comptroller General to pay claims chargeable against lapsed appropriations and to provide for the return of unexpended balances of such appropriations to the surplus fund.

Heretofore, under statutes governing annual appropriations, departments have been authorized to place orders, award contracts, and incur other obligations during the fiscal year. After the close of the fiscal year, no further obligations could be incurred; but an extra two years were allowed during which outstanding obligations were liquidated. Thereafter, the appropriations lapsed and were carried to the so-called surplus funds of the Treasury. New appropriations later were made, to pay claims against the lapsed appropriations, up to 10 years after accrual of the claims, upon certification by the General Accounting Office.

This Act annually transfers the unexpended balances of lapsing appropriations to a new consolidated account on the books of the General Accounting Office, where it will remain available to settle all certified claims filed not later than 10 years after their accrual.

DIGEST OF SPEECHES

Extracts from speeches and public statements pertaining to the Defense Establishment

Lieutenant General Eddy:

DEFENSIVE AND OFFENSIVE PHASES OF FUTURE WAR

Let us look ahead a few years, when a major attack could be launched against the United States itself. Along with large-scale air attacks and missiles of mass destruction, airborne or seaborne troops would certainly be landed. Fifth columnists would swing into action everywhere in the country. Among the first targets of saboteurs would be our Air and Naval forces and our Army at home—their bases, training centers, communications system, their supply depots, and the aircraft industry. Certainly the atomic energy plants and stockpiles would be included. An attack of this kind, on a large scale, could be met only by trained and highly mobile Army forces in the United States.

The conservative requirement for Army forces-in-being, to deal with the direct attack alone, would amount to at least a dozen divisions—highly mobile, hard-hitting, and placed at critical points all over the country. These are the barest Army requirements. A modest estimate is that close to a million combat troops would be necessary in the United States alone to meet the initial shock of such an attack. There would be no time to mobilize, no time to prepare. This part of the Army would have to be ready when the first enemy bomber flew over our borders, or when the first Air Force base or Naval port was attacked. This is one of the reasons why we must provide well-trained and organized National Guard and Organized Reserve units.

Another task of high priority would be to seize or hold defensive bases from which our Air Force could intercept further air attacks on the United States. If we are to have an even chance of success, we must deny to an enemy base areas such as Alaska, Greenland, and Iceland. These would be irresistable to him as points from which to keep us on the defensive and make us fight on our homeland. We absolutely must deny these places to an enemy.

Ideally, the United States and its Allies should have bases like these beforehand. But if the cost of this is prohibitive and if, for other reasons, we have to take these bases away from an enemy, we must be prepared to do so at once—not 30, 60, or 120 days after the first blow. At least five or six combat divisions would be needed at once to hold Alaska, Greenland and Iceland as defensive areas. Half again as many would be needed to take them away from an enemy.

But . . . we cannot win a war defensively. What of the counteroffensive? The Air Force and the Navy must have bases near an enemy's territory, in order to carry an air offensive to his homeland with maximum economy, protection, and concentration. If we get to these bases before our opponents do, we will have to hold them against attacks of enemy land, sea, and air forces. If the enemy takes them first, we will have to take them back. Without such bases, a major air effort cannot be brought to maximum intensity.

Who will seize and hold these bases? Certainly no service, or single force, alone. They will have to be taken by joint operation of the Army, Navy, and Air Force. But having these bases by joint action, it will be up to the Army, primarily, to see that they are held.

As an example of the function the Army has to perform before the Air Force can do its job, it is estimated that from six to ten Army divisions, with supporting troops, would be necessary to take and hold such an area from which a large air force could operate. Seven to fourteen Army divisions, for example, would be needed to hold Japan, from which a sizable air force could operate. It is no deprecation of air power to say that with-

out land forces of this magnitude the air effort from such areas would fail.

The seizing and holding of two or three bases would require at least fifteen Army divisions. These troops would consist of airborne, armored, and infantry units, with the necessary combat and service-support units, all highly trained, mobile, and equipped with most modern weapons. Since it takes an average of twelve months to build a division, this means that most of this Army contingent must be ready as soon as, if not before, the offensive air force is ready.

We all agree that retaliation by air must be immediate. That is one of the main values of air power. But can the air attack be immediate and effective unless Army forces are prepared to cooperate in taking and holding bases? From this standpoint, is not the Army as much a part of air power as are airplanes?

With the increasing ranges of aircraft, is not the day near when an air offensive could be launched from the North American continent *without* the use of outlying bases? I am told that, from the technical standpoint, aircraft with such capabilities are not far from reality. But, will longer-range aircraft necessarily make it possible to base the air offensive on this continent? For instance, how can our bombers have fighter protection without advance bases? And will not our lack of bases be an invitation for the enemy to take bases at will and press their attack even closer to our homeland?

No matter how far or how fast our planes can fly, the United States will have to deny bases from which an enemy can attack our territory more easily, and we will want oversea offensive bases as well. [Bases are necessary] under any circumstances.

From an address by Lieutenant General Manton S. Eddy
Commandant, Command and General Staff College
before the Toledo (Ohio) Chamber of Commerce

Under Secretary Kimball:

ACHIEVEMENTS IN ARMED SERVICE PROCUREMENT

There is a great deal of misunderstanding about what unification means. This is especially true about money. There is a lot of talk about the savings that could be made through more unification. This kind of talk comes mostly from people who do not know how far unified spending already is in effect.

Money can be saved by having almost all purchasing done in one place for all the services. But that idea did not originate with unification; it had gone a long way when the Unification Act was passed. It has gone ahead since, and I do not see how it can go very much further. Before unification, nearly everything that could be used by more than one service was bought by a single service—for all. The Navy buys fuel for everybody; the Air Force buys all photographic equipment; the Army buys meat, and so on. At present about 86 per cent of all money spent by the military services is spent jointly by more than one service—or it is spent by one service for all. The remaining 14 per cent, which the services spend separately, is very hard to narrow down. About four per cent comprises items that only one service has use for; and the rest now is under study.

There is a limit to the savings that can be made by any single procurement system. If you buy 100 yards of uniform cloth, it costs a good deal more for each yard than if you buy 100,000 yards. But if you buy 100,000,000 yards, it probably will cost as much for each yard as if you bought 100,000 yards. For there is a point beyond which no economies can be effected by mere bulk. Therefore, when next you hear about the billions that could be saved, just ask: Which billions? Point out that unification of procurement is an accomplished fact.

From an address by Under Secretary of the Navy Dan A. Kimball
before the Naval Club of the United States